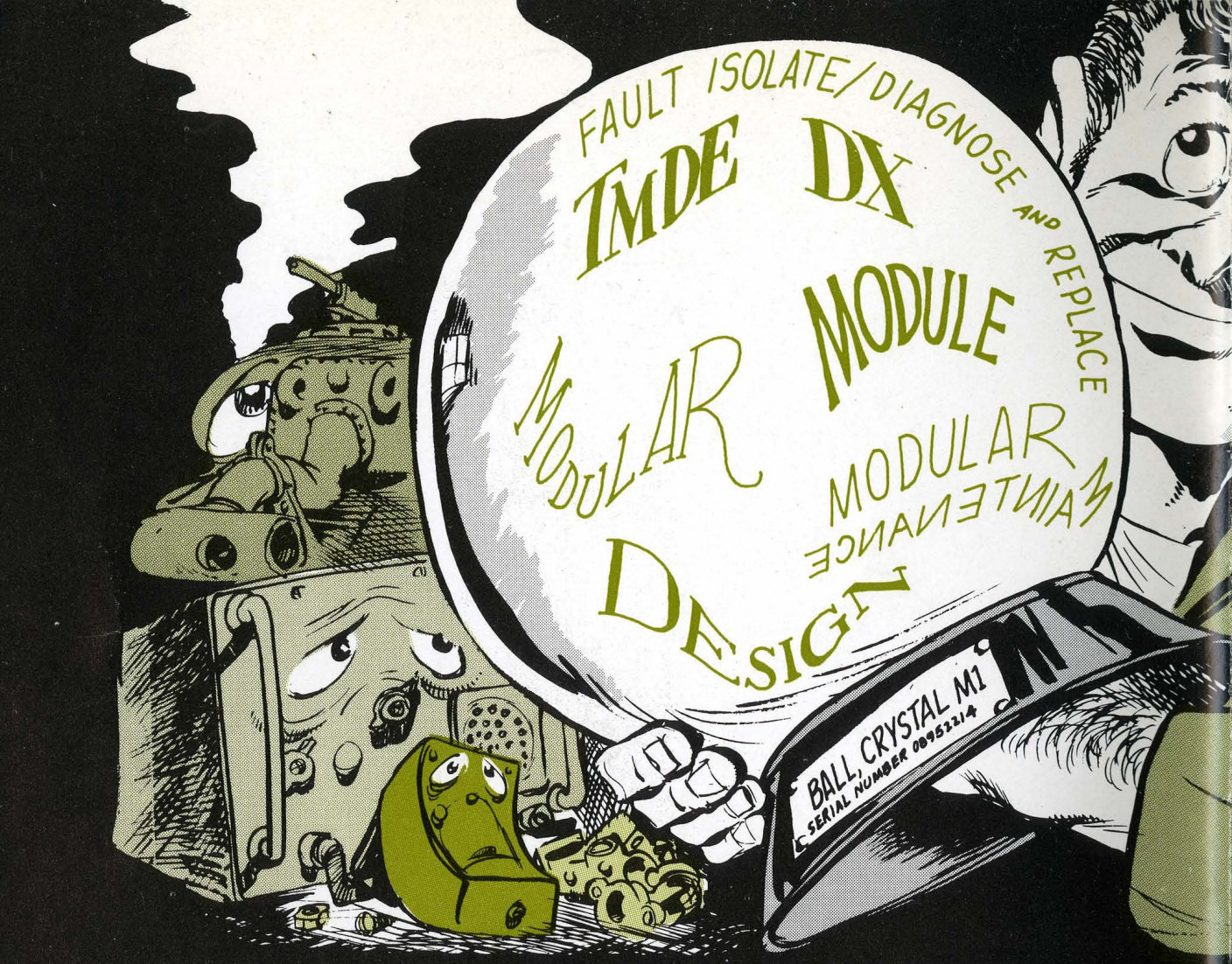
Issue 224

PS

1971 Series
July

THE PREVENTIVE MAINTENANCE MONTHLY

CALIBRATION
SEE PAGES 29-36



Those terms might be called a look into the Army's maintenance future.

The key word is "module." A module might range anywhere from a tiny assembly in your radio to a tank engine.

Maintenance will work like this —

The unit technician (call him a mechanic, armorer, or whatever) first uses his TMDE (that's Test, Measurement and Diagnostic Equipment) to find out what's wrong with the equipment.

Then, he replaces the module or assembly that's not working.

Detailed repair of the module will be done by support units. Some real complicated modules might have to go all the way to a depot or factory to be overhauled.

New equipment will be designed so that more modules or assemblies can be replaced by the using unit. This will be in lieu of replacing many small piece parts. The manuals on current gear are being revamped so the same idea can be applied to the equipment you're now using.

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This ought to make for a real streamlined fighting outfit.

You can read about how it's being set up in DA Circular 750-34 (19 Aug 70).

PS

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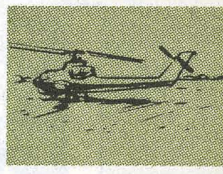

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THE GAGE'LL TIP YOU OFF TO

Worn piston rings . . .
Weak valve springs . . .
Sticky valves . . .
Faulty distributor advance mechanisms . . .
Clogged muffler . . .
Leaky gaskets . . .
Loose manifolds . . .
Poor idling mixture adjustment . . .
And a kit full of similar aches and pains.

Why the vacuum gage?

The reason is that the vacuum in a gasoline engine must behave in a certain way under certain conditions. Any misbehavior is a clue to trouble—the vacuum gage detects misbehavior.

What's vacuum got to do with a gasoline engine? Where does it come from?

Well, vacuum is formed on the down stroke of each piston as it sucks fuel into the cylinder. The exhaust valve is closed and the intake valve is open—this makes the intake manifold and the cylinder one single chamber. As the piston moves downward the area of the chamber increases.

And as it gets bigger, it wants to suck in an equal volume of fuel and air mixture, but the small opening (venturi) in the carburetor air horn won't let enough through; only a portion gets through. This reduces the pressure in the chamber to a point well below atmospheric pressure.

And there you have your vacuum condition.

GROUND MOBILITY

IN THE HANDS OF A GOOD MECHANIC A VACUUM GAGE IS LIKE A CRYSTAL BALL... ESPECIALLY WHEN SEARCHING OUT CAUSES OF EXHAUST AIR POLLUTANTS.

...IT SEES ALL, KNOWS ALL, AND TELLS ALL!

THE VACUUM GAGE

YOUR CRYSTAL BALL

FOR AIR POLLUTION CONTROL

IT'S TH' WHOOSIS!

IT'S TH' FRAMMIS!

I CAN BE USED ON... GENERATORS, PUMPS, COMPRESSORS, TRACTORS, FORKLIFTS ...OR ANY PIECE OF EQUIPMENT THAT HAS A SPARK IGNITION ENGINE.

T69-2300-802-10 AIR POLLUTION CONTROL

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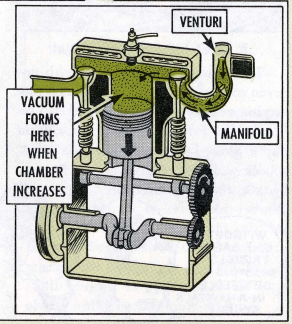


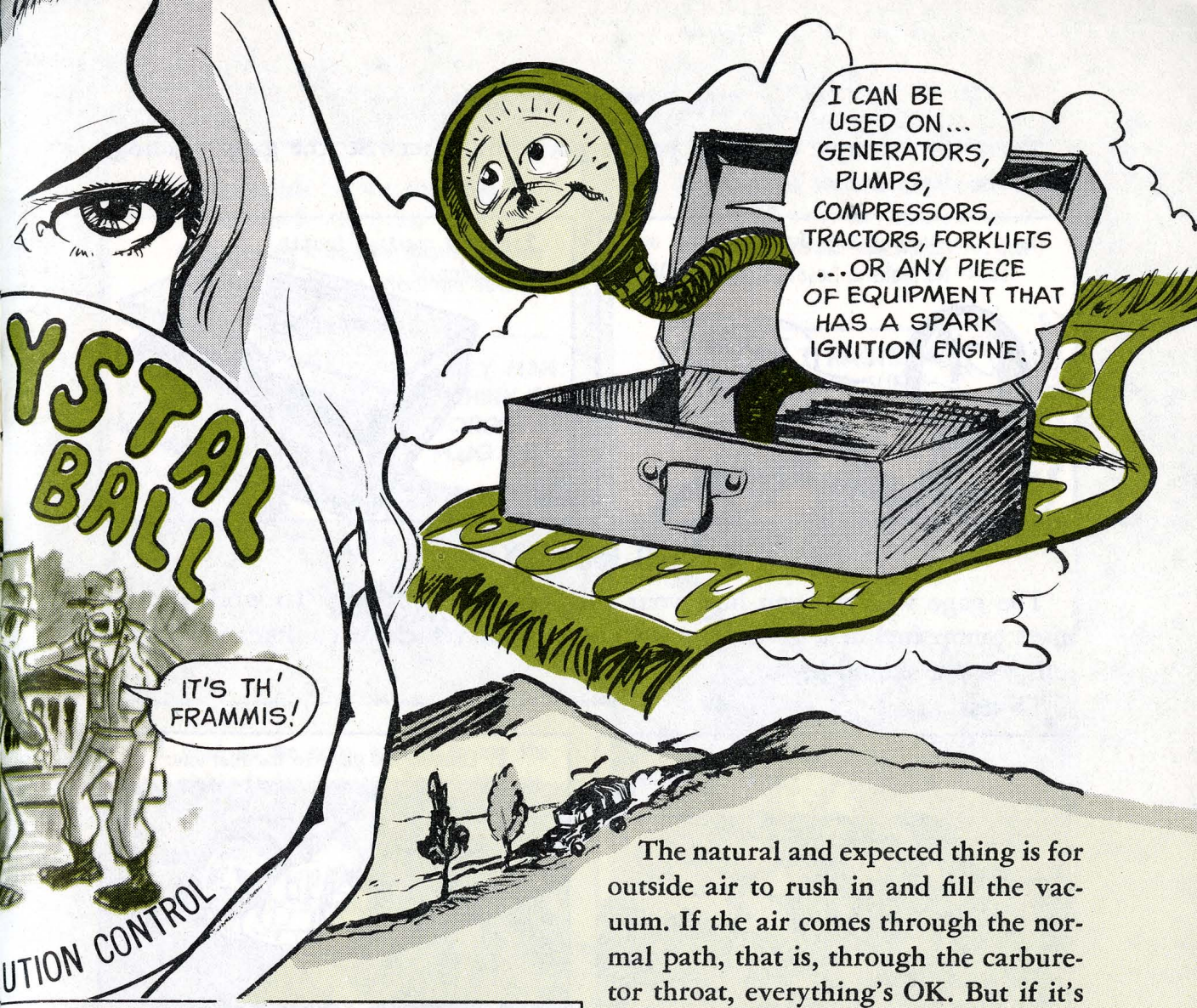
The natural and expected thing is for outside air to rush in and fill the vacuum. If the air comes through the normal path, that is, through the carburetor throat, everything's OK. But if it's sucked in through any other place, that's bad.

Here's where your crystal ball — the vacuum gage — steps in. It'll point to the possible source of leaks and other trouble — which is a lot better than hunting high and low over the engine in a helter-skelter fashion.

Your Internal Combustion Engine Gage (FSN 4910-255-8673)

is in Tool Sets . . .
No. 1 Common — SC 4910-95-CL-A74
No. 2 Common — SC 4910-95-CL-A72
No. 2 Supplemental — SC 4940-95-CL-A08

PS MORE



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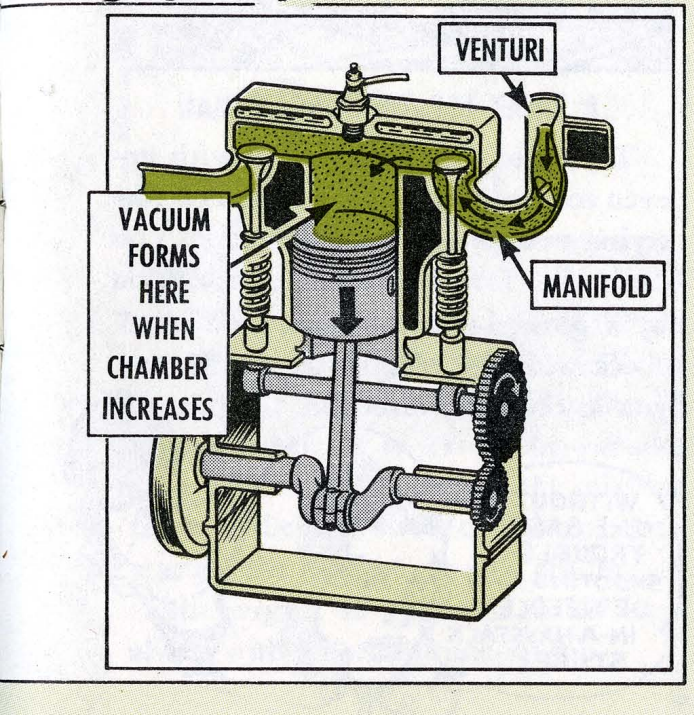

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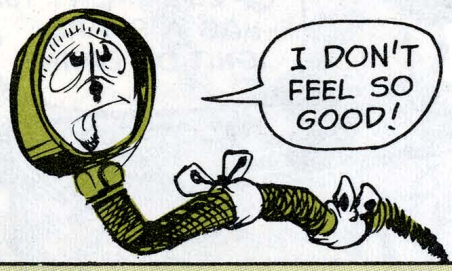
PS MORE

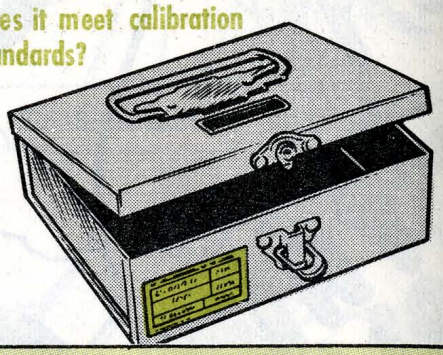
BEFORE USING YOUR GAGE

There are a couple of things you've got to do otherwise the gage readings won't be dependable.

1. Is the gage in top shape? Needle on zero? No leaks in hose? Adapter fit OK?



2. Does it meet calibration standards?

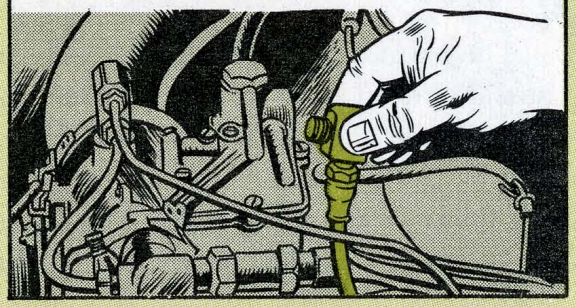


FUEL PUMP TEST

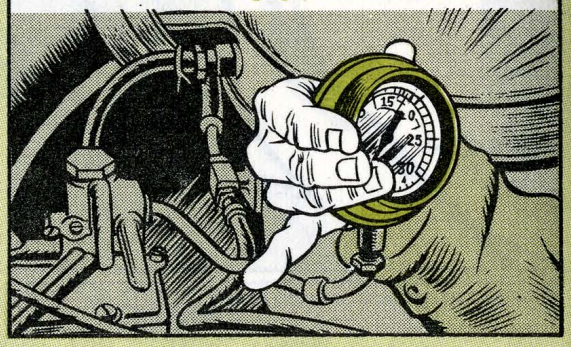
The gage will tell you how your fuel pump is behaving. To work right it must pump fuel at a given pressure—and your vehicle or equipment's -20TM tells what it should be.

To test...

1. Disconnect the fuel line at the carburetor.



2. Connect the gage to the fuel line.



3. Start engine (it'll run on fuel left in the carburetor) or have it cranked with the starter.

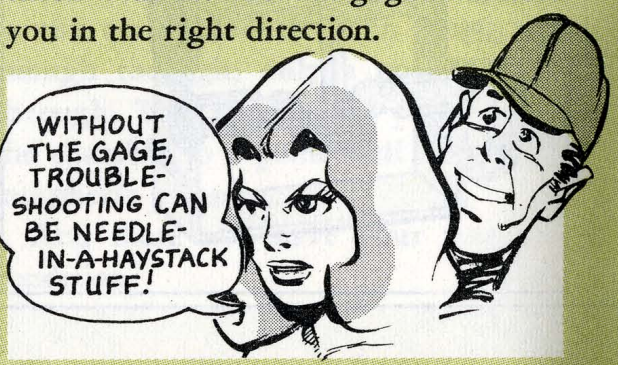
4. Now read the PSI on the gage's bottom scale.

If it's within the PSI given for that piece of equipment, it's OK. But if it's below the specified PSI and if the fuel line isn't clogged, the pump needs changing.

If you're testing an electric pump, make your hook-up where the equipment's -20 TM says.

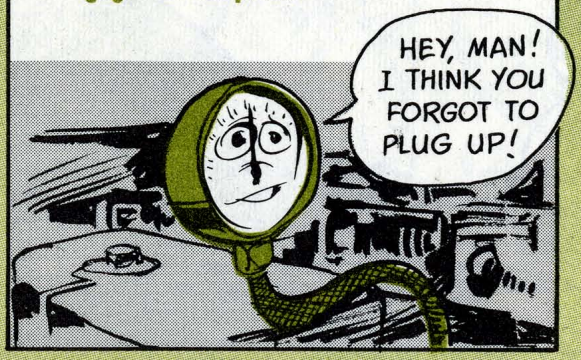
A BREAK FOR THE TUNE-UP MAN

Trying to do a tune-up job with uneven compression in the cylinders is like trying to tune a 5-cent tin whistle. You can't cure low or uneven compression by a glossed-over tune-up, so a quick check with the vacuum gage will steer you in the right direction.



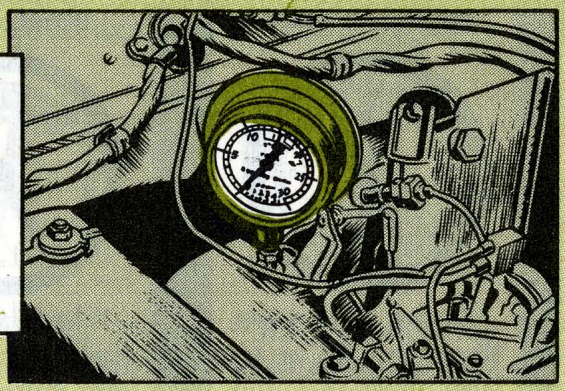
VACUUM TEST

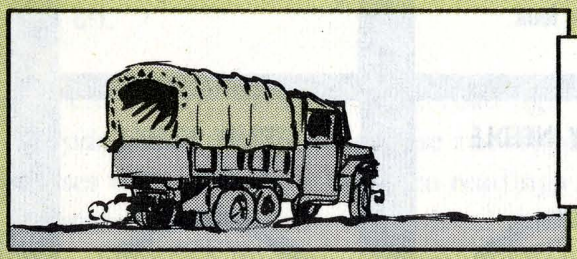
1. If your vehicle has a combination fuel and vacuum-booster pump you'll have to disconnect it from the manifold. Either plug the opening or attach the vacuum gage at this point.



2. Make sure all the head-nuts, manifold-nuts, spark-plugs and vacuum connections are tight. But take it easy . . . don't overtorque.

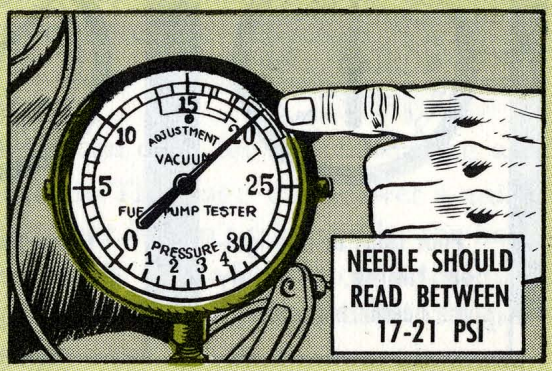
3. Hook-up the gage. Be sure to use the right adapter. Connect either to the vacuum-booster pump connection or into the usual opening in the manifold — after removing the pipe-plug. Connections must be tight.





4. Run the engine and bring it up to its minimum operating temperature (until the temp gage needle begins to move).

With the gage hooked up and the engine running at idle (about 600 RPM or check your -20 TM) the needle should read between 17 to 21 on the vacuum scale (upper scale). Adjust the mixture screw at the base of the carburetor until you get the highest possible reading. A slight wiggle in this area is OK, go ahead with a normal tune-up job.



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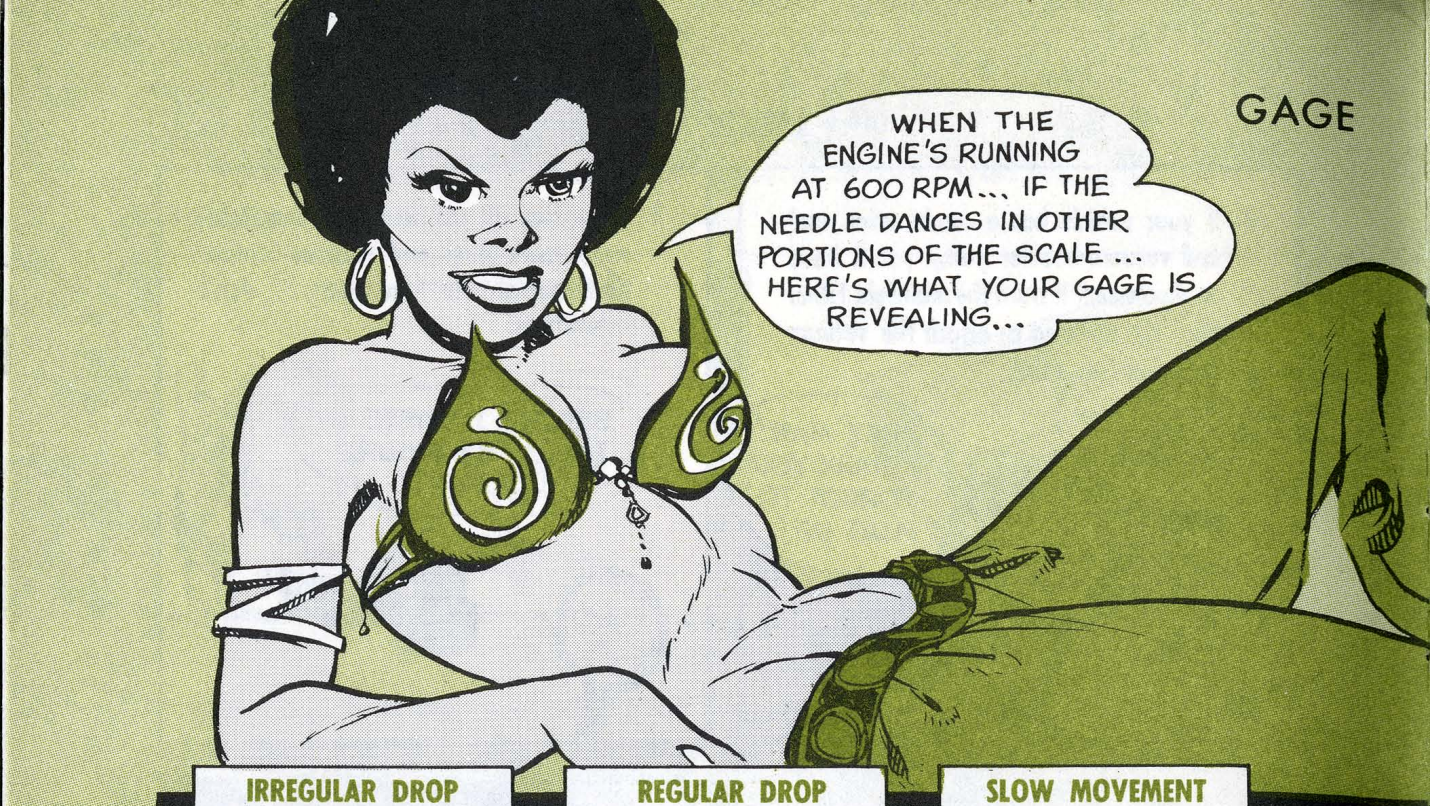
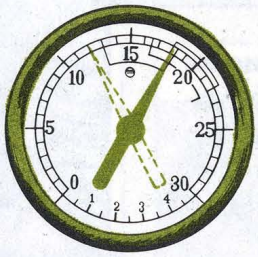


IRREGULAR DROP

Gummy valve stems. Mixture too rich or too lean. Occasional plug miss. Internal carburetor trouble.

REGULAR DROP

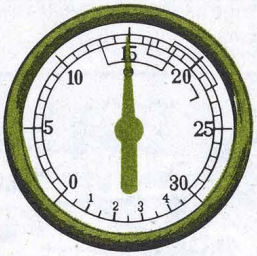


Valve held open. Valve chipped, or burnt, or leaks. Warped valve seat. Head gasket leak.

SLOW MOVEMENT

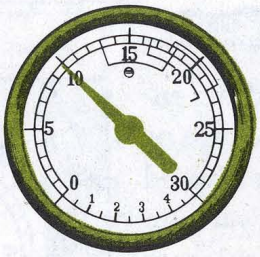
Late valve timing. Also

STEADY NEEDLE BETWEEN 14-16



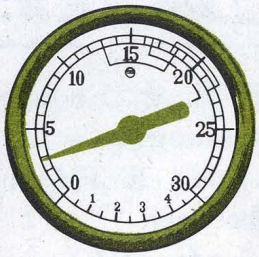
Poor rings or late ignition timing. (Possibly some needle motion.)

STEADY NEEDLE



Loose valve guides.

STEADY NEEDLE



Intake manifold leaks.

GAGE INDICATORS

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ENGINE NORMAL

STEADY NEEDLE BETWEEN 17-21

OPERATING ENGINE BY QUICKLY OPENING AND CLOSING THROTTLE

Needle drops to 2 when opening throttle, and rebounds to 25 when closing, indicates normal engine.

Needle drops to 0 when opening throttle, and does not rebound to 25 on closing. Poor rings, pistons.

SLOW MOVEMENT

Carburetor out of adjustment. Plug gaps too close. Ignition timing off.

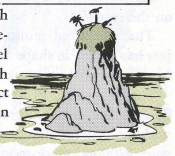
ENGINE RACING OR IDLE

Normal reading at start, but gradually drops, indicates choked muffler.

ENGINE RACING

Wide variations of needle increasing with motor speed indicate weak, or broken valve springs.

Incidentally, vacuum gage readings will vary with altitude above sea level, because atmospheric-pressure decreases with altitude. The given readings are for sea-level for each 1,000 feet above sea-level deduct about 1 inch from the readings pictured here. To pin-point the exact cylinder that's leaking, you'll have to make a compression test. See PS 219.



THAT'S NOT ALL

The vacuum and fuel pump pressure gage can do a lot more detecting and TM 9-4910-477-10 can clue you in to all of them. The gage can answer a multitude of questions if you're hep to it. The fact that it won't take you by the hand and lead you to the actual trouble on a moment's notice is apt to be a little discouraging but with a little practice will prove that the "crystal ball" can pinpoint trouble spots with amazing accuracy.

INDICATORS

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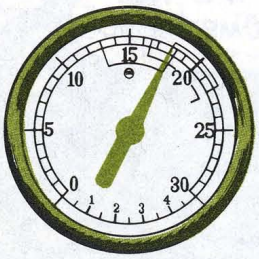

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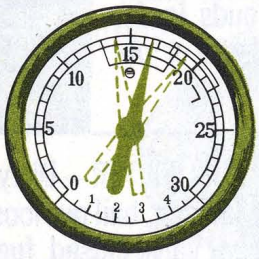

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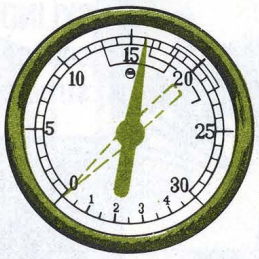

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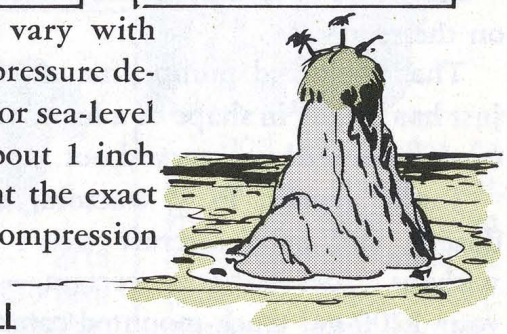

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PS END

BE YOUR OWN INSPECTOR... TANK &

Like the key that holds the gear on the shaft—

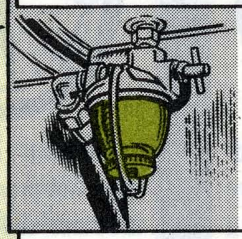
Like the nail that holds the horseshoe on the nag—

That tank and pump unit of yours just has to stay in shape or a lot of other equipment will get starved out.

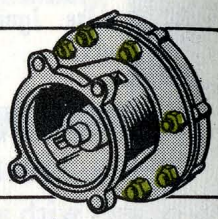
Tanks, trucks, PC's, tractors, bulldozers, and even aircraft won't run without fuel—that's certain—and your 1200-gal truck-mounted combo is the fuel-tank Gunga Din for all of 'em.

So here's where you can look for troubles that might take your vital virtuoso out of the lineup just when it's most needed. The **bold type** items are real serious.

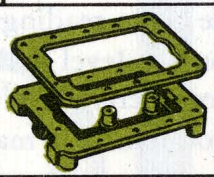
CYLINDER—Shrouds loose, cooling fins clogged or obstructed, dirty.



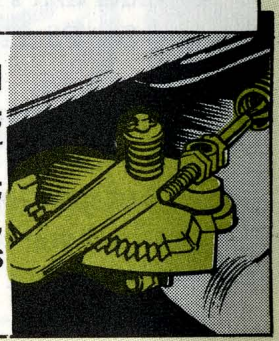
FUEL FILTER—Dirty, **gasket leaking,** bail nut loose, shut-off valve closed, fuel-supply elbow threads stripped, **line leaking.**



PUMP - TO - ENGINE - COUPLING—Bolts loose, bracing broken. Shaft sheared.

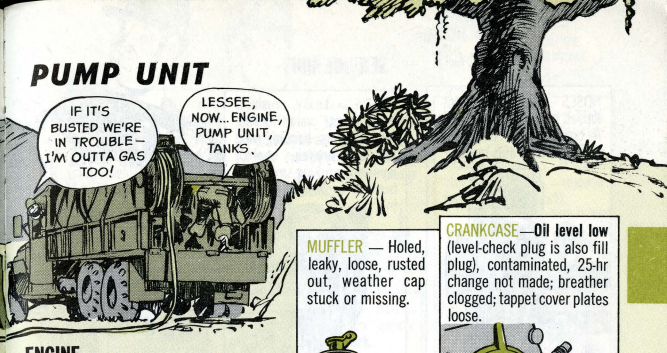


MOUNTS—Unit not securely fastened, bolts loose or broken.



GOVERNOR — Control rod from carburetor bent, loose; support pin bent, spring or cotter pin loose, missing; speed control lever bent, slipping; adjusting nuts loose, set up too far.

BE YOUR OWN INSPECTOR... **TANK & PUMP UNIT**



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MUFFLER — Holed, leaky, loose, rusted out, weather cap stuck or missing.

CRANKCASE—**Oil level low** (level-check plug is also fill plug), contaminated, 25-hr change not made; breather clogged; tappet cover plates loose.

ENGINE

MAGNETO — Cable broken, loose. Loose mounting, cover.

AIR CLEANER — Oil not changed when crankcase serviced; dirt in sump; **no oil at all;** screen dirty; gaskets or ducts loose, leaking.

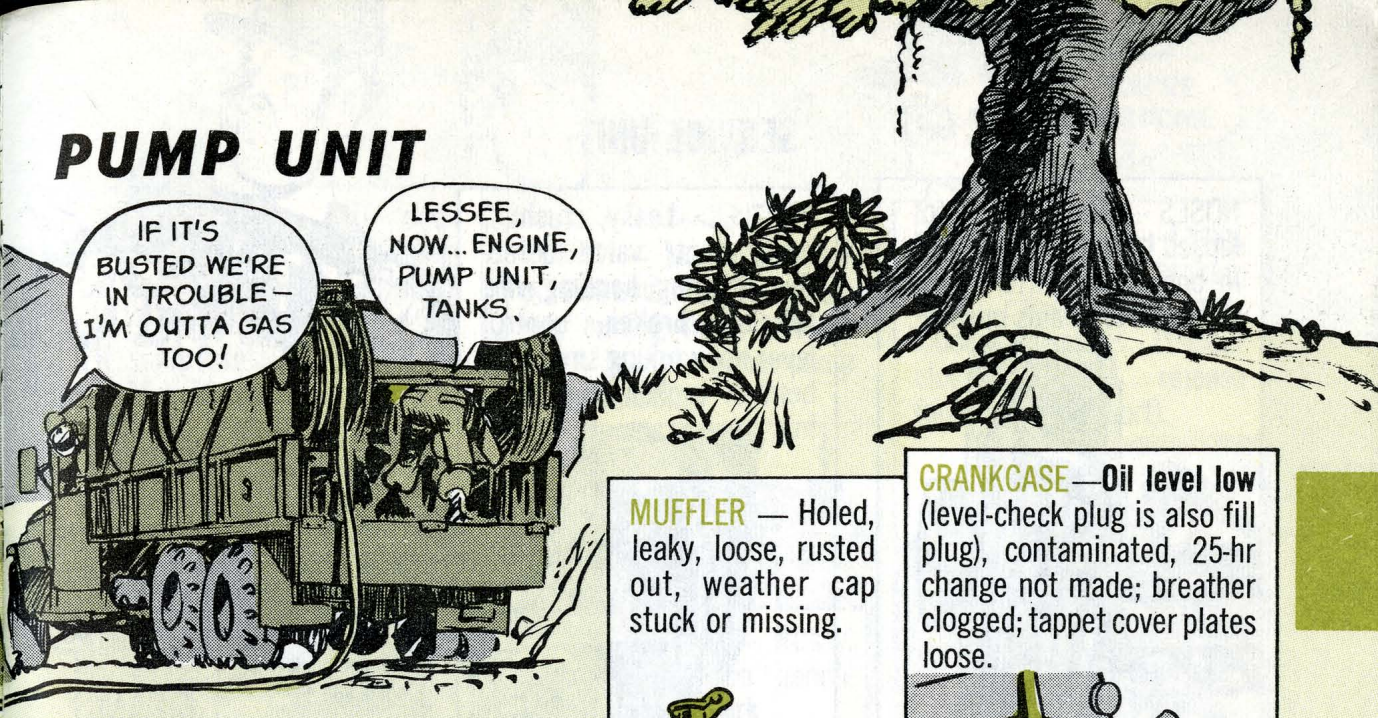
IGNITION—Spark plug cable loose, frayed, cut; grounding cable broken, loose; ignition switch retainer nut loose, missing; magneto case broken, loose.

CARBURETOR — Parts loose, governor control bent or broken; **fuel dripping;** idle set too high/low; mount on manifold loose. Start engine — adjustment OK? (See Fig 3-20 of your TM 10-4930-204-15 for adjustment word.)

STARTER PULLEY — Slots sharp-edged; rope missing, handle broken; screen under pulley damaged, missing; covers on shrouds loose.

PS MORE

PUMP UNIT



ENGINE

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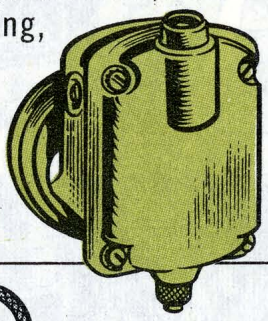

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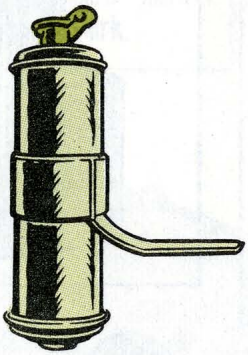

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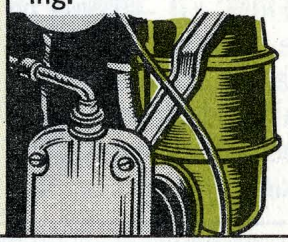

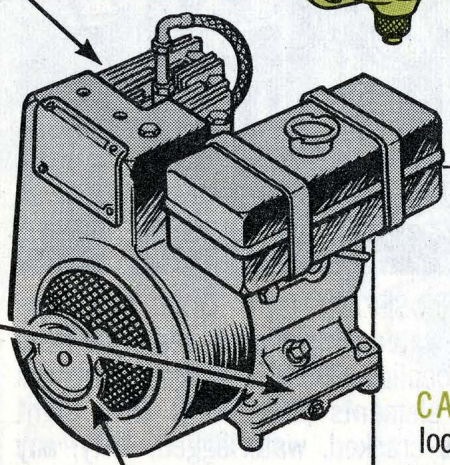

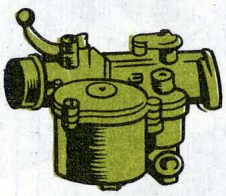

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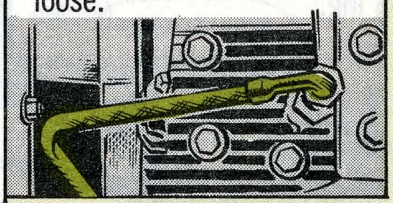
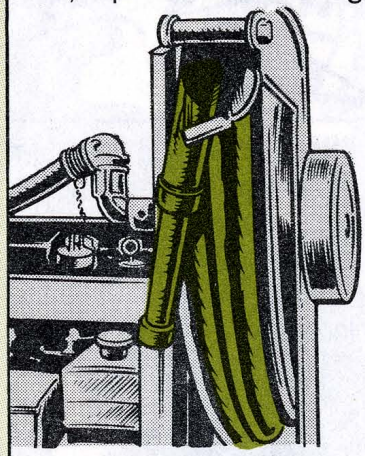


STARTER PULLEY — Slots sharp-edged; rope missing, handle broken; screen under pulley damaged, missing; covers on shrouds loose.

PS MORE

SERVICE UNIT

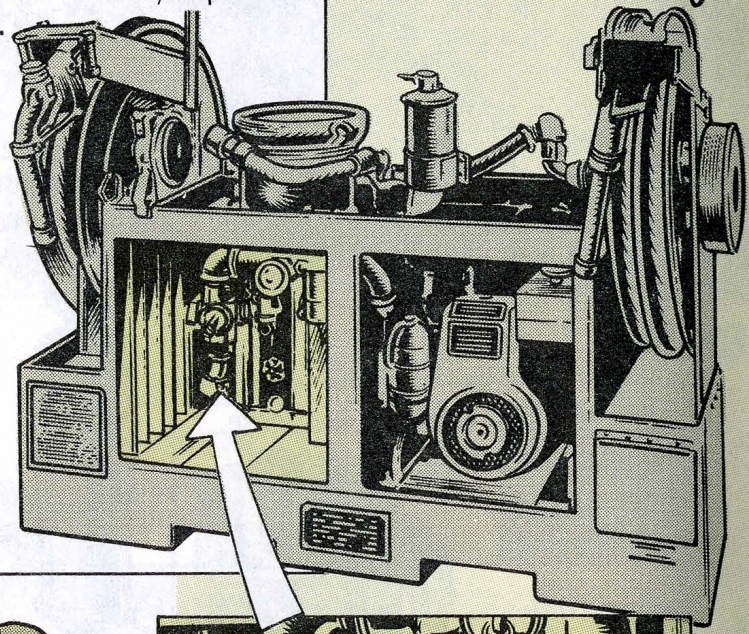
HOSES — Cut, **leaky,** collapsed by kinking too much in one place; rotten, worn out, caps or chains missing.

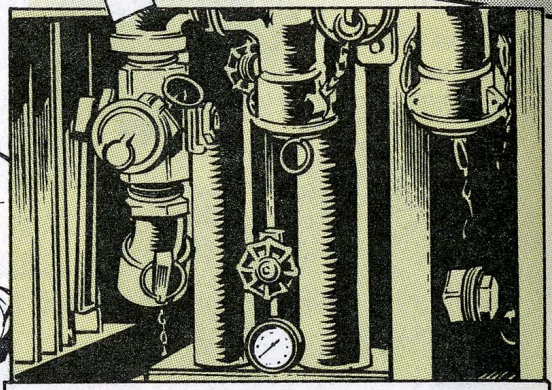


HOSE REELS—Spring housing loose, crushed, bolts missing; guides sticking, rolls rough; reel faces damaged; recoil spring weak, broken.

METERING KIT — Loose on base, **leaking;** recorder damaged; calibrator not working; adapter or connector bolts loose, out; shutter sticking.

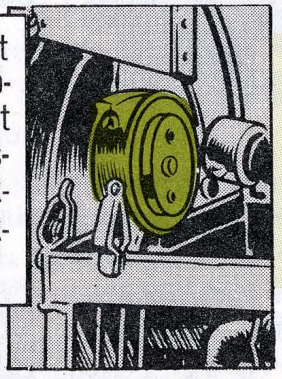
NOZZLES—**Leaky,** crushed, badly bent; valve defective, **dripping; bonding wire missing, broken;** control lever not working smoothly, bent or broken, cap missing.





FILTER-SEPARATOR — Drain line clogged; water sump choked; separator head or couplings loose, damaged; canisters and elements (there're 4) dirty; sight glass cracked, waterlogged, dirty; **any leaks thru gasketed joints;** intake pressure gage or discharge pressure gage glasses, cases, or fittings broken, dirty, unreadable; hand valve wheels broken or badly chipped, not working right; 3-way valve defective in any way. Protective caps missings.

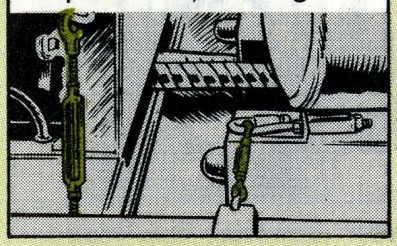
GROUND REELS — Shaft wobbly; **bonding strap broken;** bonding cable won't retract; clips loose, **missing;** tension release sticking; mainspring not working.



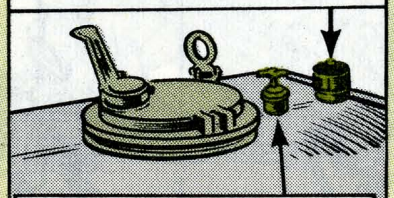
TANKS

YOU'RE WELCOME.

TIEDOWNS — Lift eyes rusty, bolts or nuts missing; turnbuckles loose, stripped; drain holes not drilled in skids (see TB 750-971-2 dtd May 70, pp. 13 & 14), drag loops broken, missing.

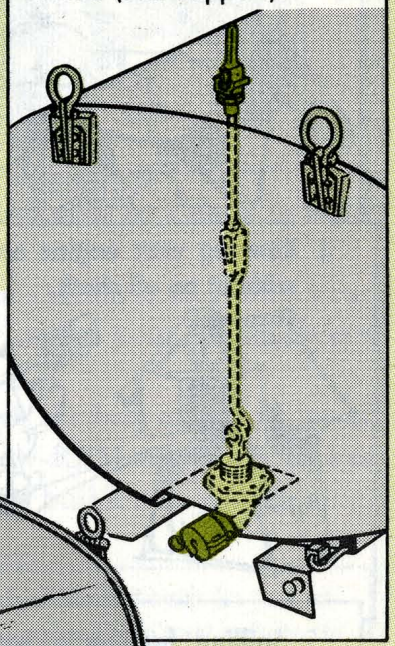


PORTS — Manhole cover port strainer clogged, missing; mating faces gashed, rusty, gaskets gone; pump unserviceable.

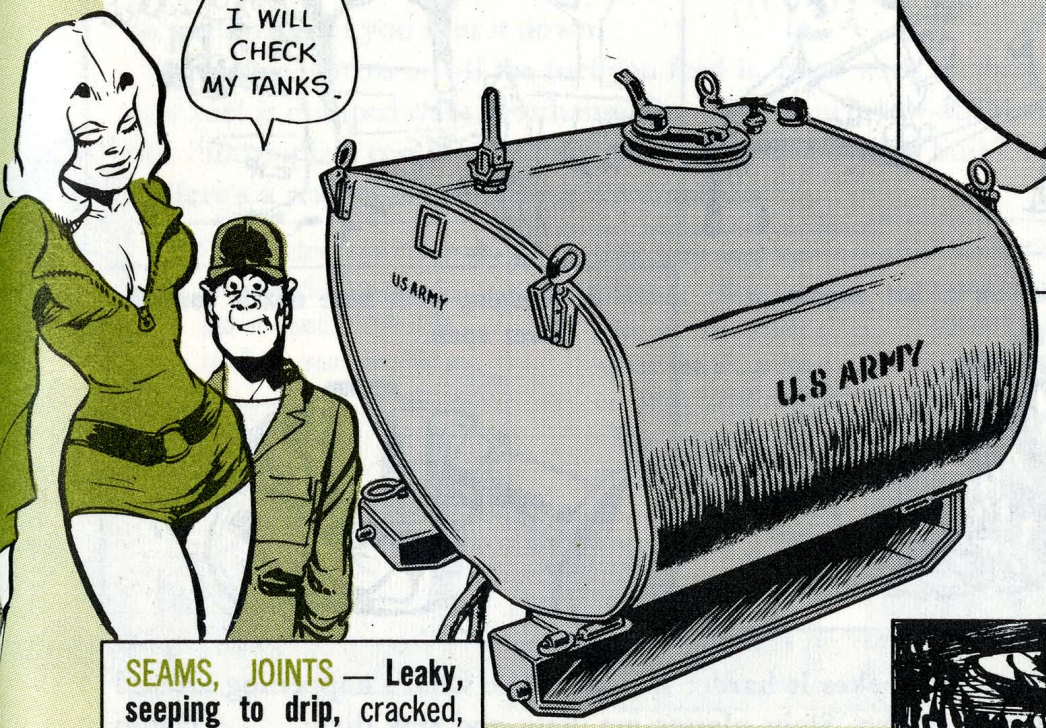


DRAIN VALVE — Rusty, sticking, tank-top handle broken, **won't work.**

DISCHARGE VALVE—**Leaky,** sticking, handle broken; dust cap/thread cover loose, missing; strainer clogged; inner release fouled (call support).



YES... I WILL CHECK MY TANKS.



SEAMS, JOINTS — **Leaky, seeping to drip,** cracked, rusty (any actual loss of fluid is a deficiency).

YUK!

INSIDE—Rusty, baffle plate loose (inspect only with spark-proof lamp when empty).

SUCTION HOSES — Cut, binding on pass-thru face, **dripping.**

PS MORE

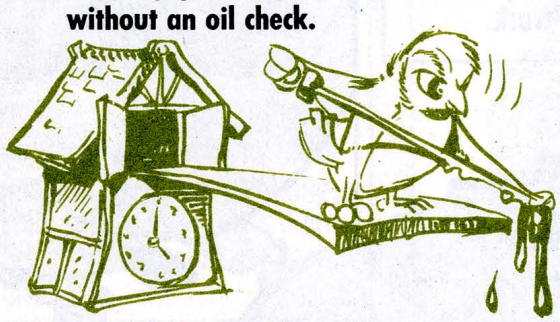
TANGLEFOOTS

Trouble-free shop perfection's not enough. The way you run is vital, too—and here are ways you avoid like plague:

1. **Running with the tail gate up.** This will burn out your engine fast. That air-cooled puncher must have ventilation.

2. **Pumping gas without bonding up or grounding.**

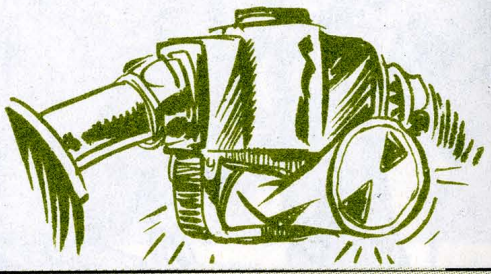
3. **Running your engine over 5 hours without an oil check.**



4. **Letting your dispensing hose snap back on rewinding.**

5. **Spilling fuel on a hot engine or exhaust pipe.**

6. **Wedging your hose nozzle control lever open.**



Tailgate-up running makes it harder for you to see what's happening around your valve and hose system. Sight glasses get dirty and stay dirty . . . a clamp comes loose . . . trash collects. And before long, a little fuel drip spreads, a stray rock strikes a spark—

Fire will do its thing on you and your truck if you give it a chance. It can happen a thousand ways. And there's one main way you can forestall it—clean and leak-free operation.

And better ideas for proper running are all through your TM 5-4930-227-14 (Highland Model 200) and TM 10-4930-204-15 (all other models)—whichever fits your particular rig.

ON GAS EATERS...

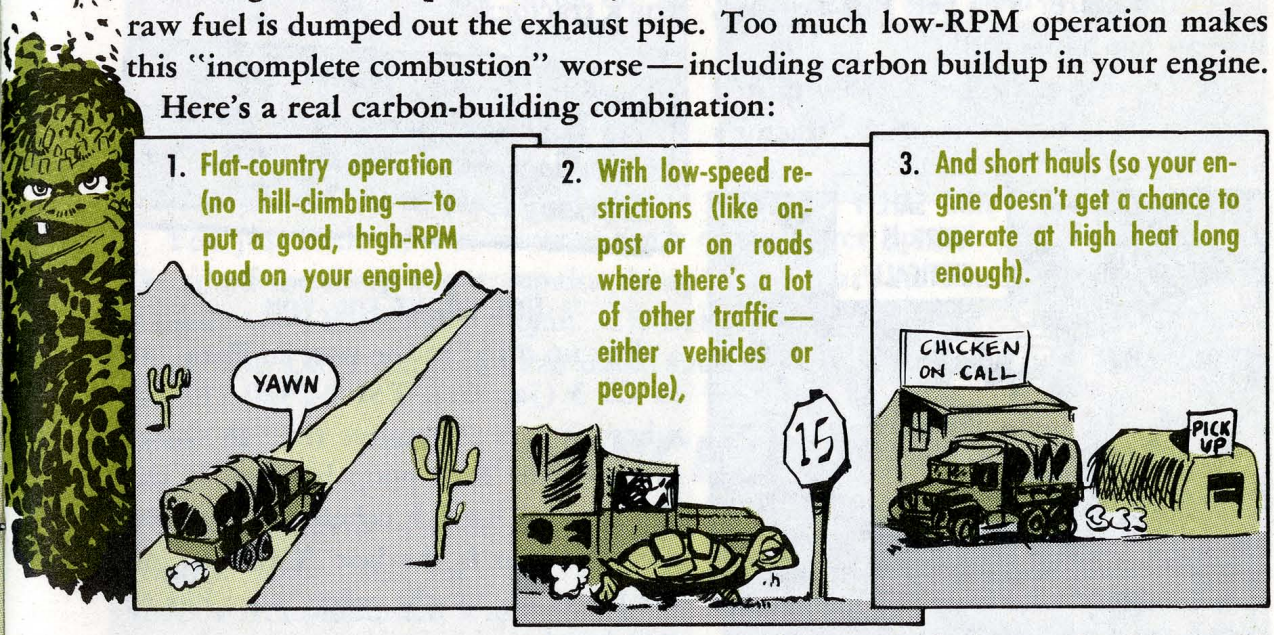
BLOW IT OUT...

Your truck engine may need deep-breathing exercises once in awhile to blow out the carbon.

A lot of low-RPM operation piles up carbon in your cylinders and fouls your sparkplugs. This can cause troubles — like dieseling, when your engine keeps on running after you shut it down.

No engine burns up all the fuel you feed it. Even with the best engine, a lot of raw fuel is dumped out the exhaust pipe. Too much low-RPM operation makes this "incomplete combustion" worse — including carbon buildup in your engine.

Here's a real carbon-building combination:



In some cases, any one of these carbon-builders can be bad enough all by itself.

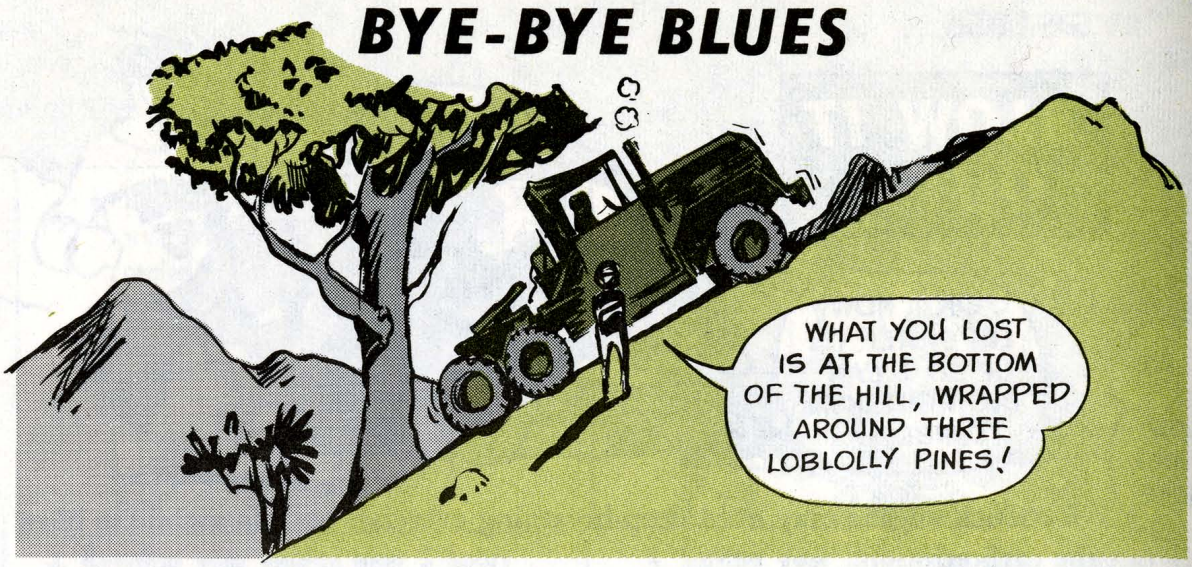
How do you stack up?

Maybe you'd better check with your maintenance officer about setting up a "blow-out run." Someplace where you can drive your vehicle at maximum allowable RPM, maximum allowable temperature and maximum safe speed for about 30 minutes.

Remember, your engine "blow-out" has to be **under load** — it's no good just sittin' in one spot racing the engine.

Your engine will 'preciate it!

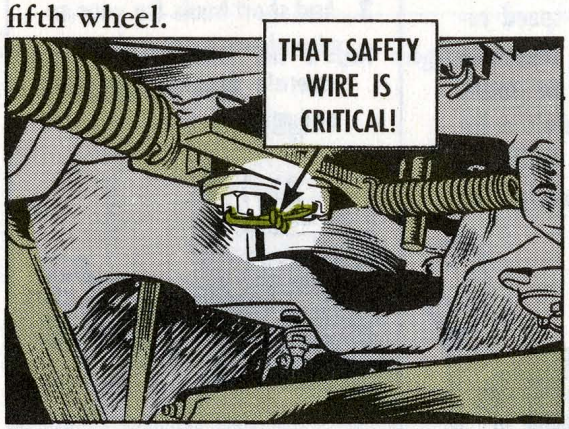
BYE-BYE BLUES



Losing your semitrailer can sure give you a letdown feeling — especially if it happens while you're rolling down the road.

A nightmare? You bet! But a dream, no — it has happened!

All because of a li'l ol' wire — busted or missing from your truck tractor's fifth wheel.



This safety wire is on the fifth wheel (FSN 2510-736-7608) that you see on lots of commercial and tactical truck tractors.

A broken or missing wire lets those nut-and-stud setups loosen. This lets the lock plunger drop down.

Then, with no fifth wheel grip on your trailer's king pin, you find yourself waving bye-bye to your trailer.

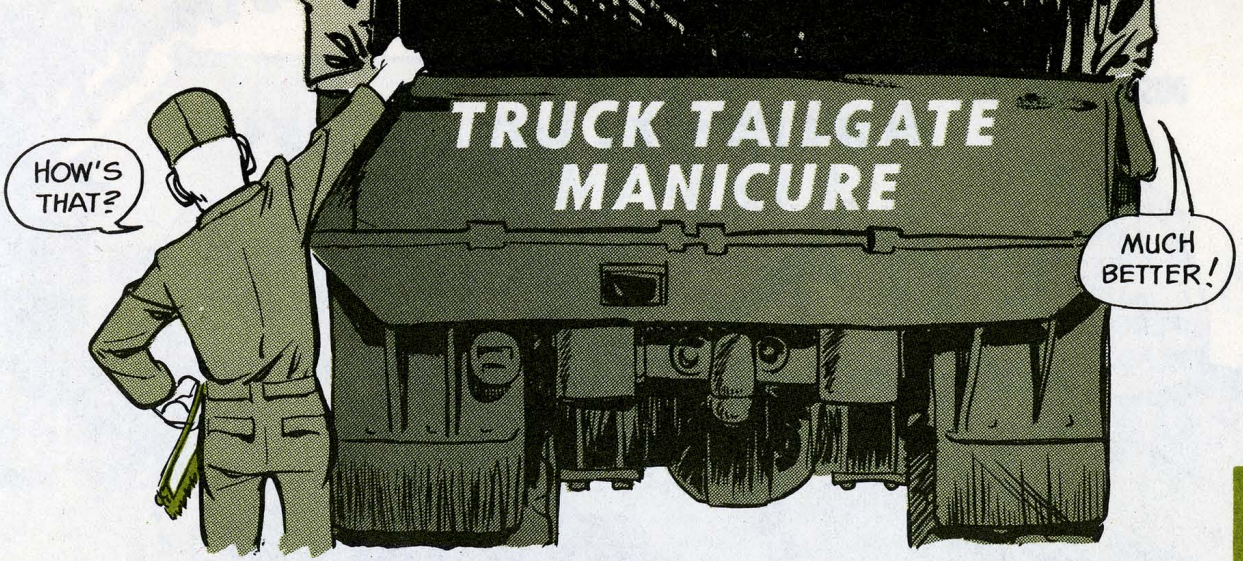
So it's up to you to make sure that safety wire's in place and in good shape, like it says in TM 9-2320-211-10, Ch 3 (Jan 65), page 2, for the 5-ton M52 truck tractor:

"Caution: Locking plunger and locking latch studs must be safety wire laced together to prevent studs from working loose in the base."

NOT MEANT FOR YOU

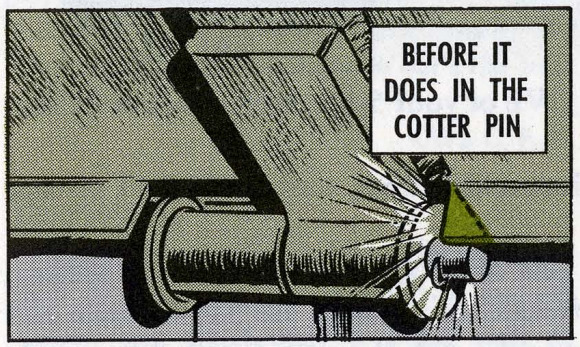
Pay no mind to the note in Para 21c in Ch 3 (Jan 65), TM 9-2320-211-10, where it says to remove the 5th wheel safety wire. That poop belongs in the -35 manual for 5th echelon. The right dope for you is the last "Caution" on the page, saying the safety wire has to stay laced.

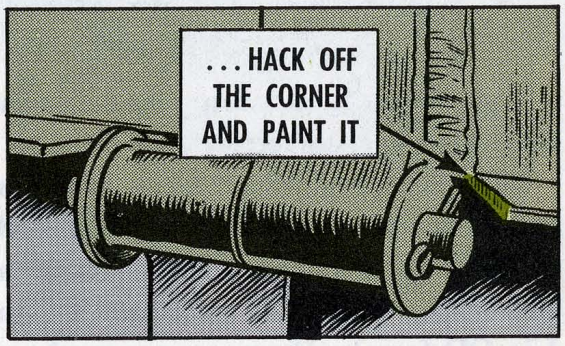
Every time you hook up your trailer, give a close look under your tractor's fifth wheel and see if everything's OK. Any cracked broken or missing parts? Everything work smooth like it's s'posed to? If you're even suspicious, get 'er checked out by your mechanic — right now.



Your 2½-ton cargo body can develop a bad case of tailgate screech. Gate frame edges scraping the hinge pins make the noise . . . and they'll eventually chop the cotter keys out so's the pins get lost.

The cure for that is a manicure.





You just hack off a 3-cornered hunk of the lower lip so it can't touch the pin. Grind off the sharp edges, repaint the spot, and that's it. You'll find this word in Article 12, TB 750-981-1 (Jan 71). Better yet, 5-ton tailgates can use the same treatment. Local command can make such minor alterations under AR 750-35.

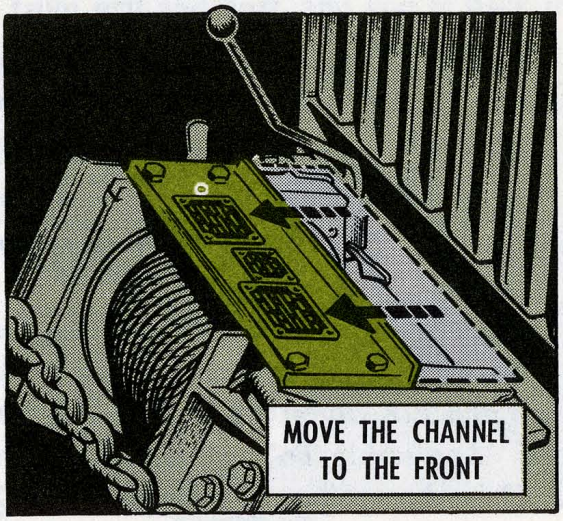
WINCH FIX

Are you havin' trouble reaching the control lever lock on your 2½-ton truck's front-mounted winch?

It's probably because that channel on top is mounted too far back on the winch.

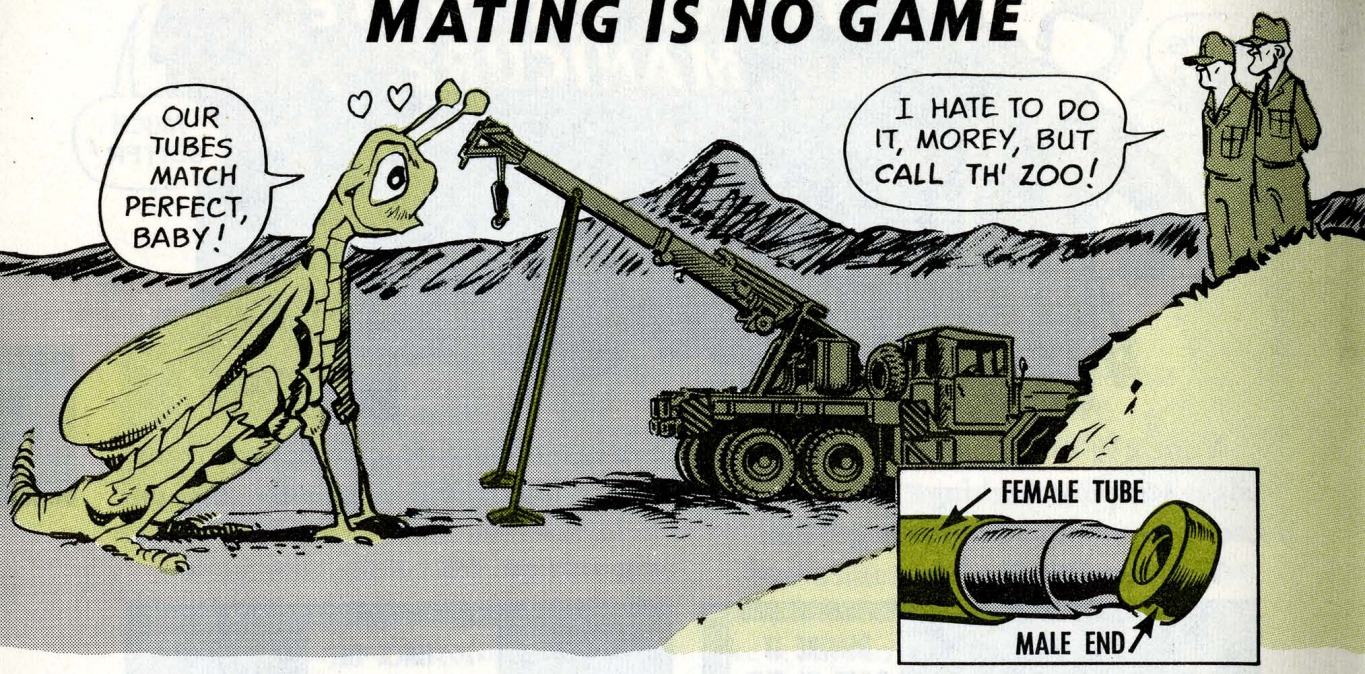
So take the channel off and mount it up front.

Fill the empty mounting holes at the back with the screws you take out of the front mounting holes. TB 750-981-1 (Jan 71) has the word on this.



BUSTED TUBE LEG?

MATING IS NO GAME



Got a pair of telescoping braces in the OVE of your 5-ton M62-series or M543-series wrecker, correct?

Well, if you happen to get a pair of mismatched tubes, they could fold up and ruin you, your wrecker, and your load.

There are a couple of different-sized sets of boom jack tubes in the system. Old ones are 3-in OD male and 3½-in female. New tubes are 3½-in male and 4-in OD female. If you try to use the old male with the new female, the whole works can go smash on you.

FSN's and PN's didn't change with the new deal, so if any of the 3-in and 3½-in OD set goes out on you, order a whole new set of 2 tubes: Tube, boom jack, bottom (female) FSN 2540-040-2301, and tube, boom jack, top (male), FSN 2540-040-2300.

Order new tubes 3½-in male and 4-in OD female on an "as required" basis.

M54A1C T-BOLT

Now it's a repair part in the supply system — the locking handle assy for your M54A1C 5-ton truck dropside cargo body. Order by FSN 2510-109-8212.

2320 TO 2350

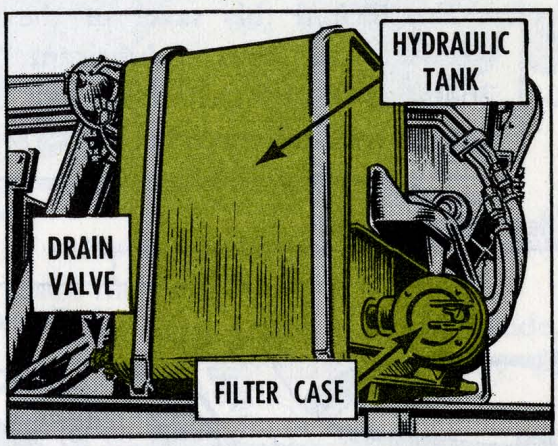
Your tracked carriers have had a group-and-class number change — 2320 to 2350. So watch your listing of carrier MWO's in DA Pam 310-7 (plus AG bulletins and EIR digest TB's). Those 2350 MWO's are for all carriers identified in the "Applicable To" column of DA Pam 310-7 — even if the front end of the FSN on the equipment data plate is 2320.

FILTER CLEANUP FOR 5-TON WRECKER

Dear Half-Mast,

Note 26 on LO 9-2320-211-12 (Apr 68) says to clean the filter element on the M543 5-ton wrecker hydraulic tank — but it's a little short on details. What's the best way to pull this little job?

CW3 C. F. P.



Dear Mr. C. F. P.,

First, be careful taking the element out. If your rig has a built-in cut-off valve, you need only a 2-gal pail to catch outflow. Otherwise, you need a clean 55-gal barrel to drain the tank.

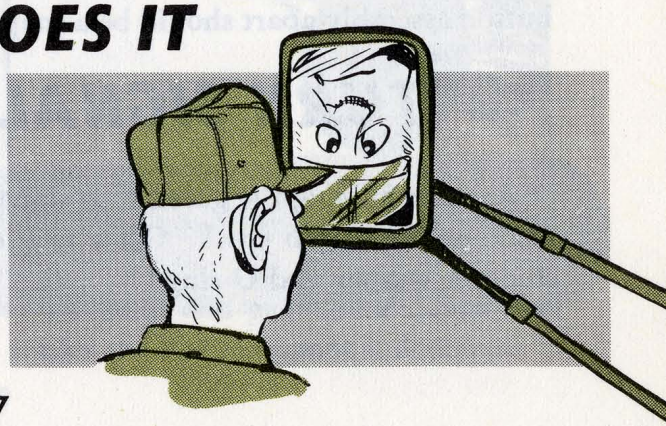
You can wash the element with dry-cleaning fluid, mineral spirits paint thinner — or even hot water and mild detergent. If mild detergent is used, rinse element twice in clean water. Then blow it out with compressed air.

It helps to rub with a common paint brush — never use a wire brush. That .027-in monel screen can't stand it. Besides, wire particles can flake-off, and wire fragments in oil are booby traps. Keep the element and case protected from grit and dust, and you're back in business.

Half-Mast

EASY DOES IT

You'll knock your rear view mirror assembly, FSN 2540-840-0022, out of kilter for good if you over-tighten its adjusting screws. Trick is to put on a gentle squeeze so the ball mounting rivets don't stretch when mirror is adjusted a few times.



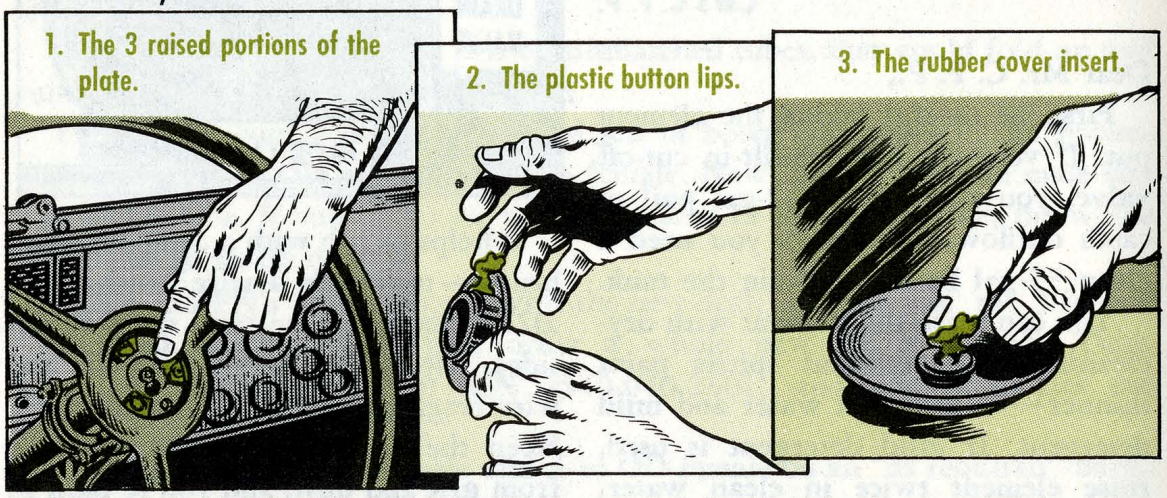
HORNIN' IN

Why blow your cool?

A few dabs of lube and you can put on a 2½- or 5-ton truck horn button in a jiffy. No strain. No grunts.

You'll find this saver of the cuss words in the form of lubricant, FSN 2640-045-0571 (gal) the same stuff used as tire and rim lube.

Here's where you use it:



Your last dab is not the least. You gotta fully lock in the cover; otherwise, it'll pop out sooner or later.

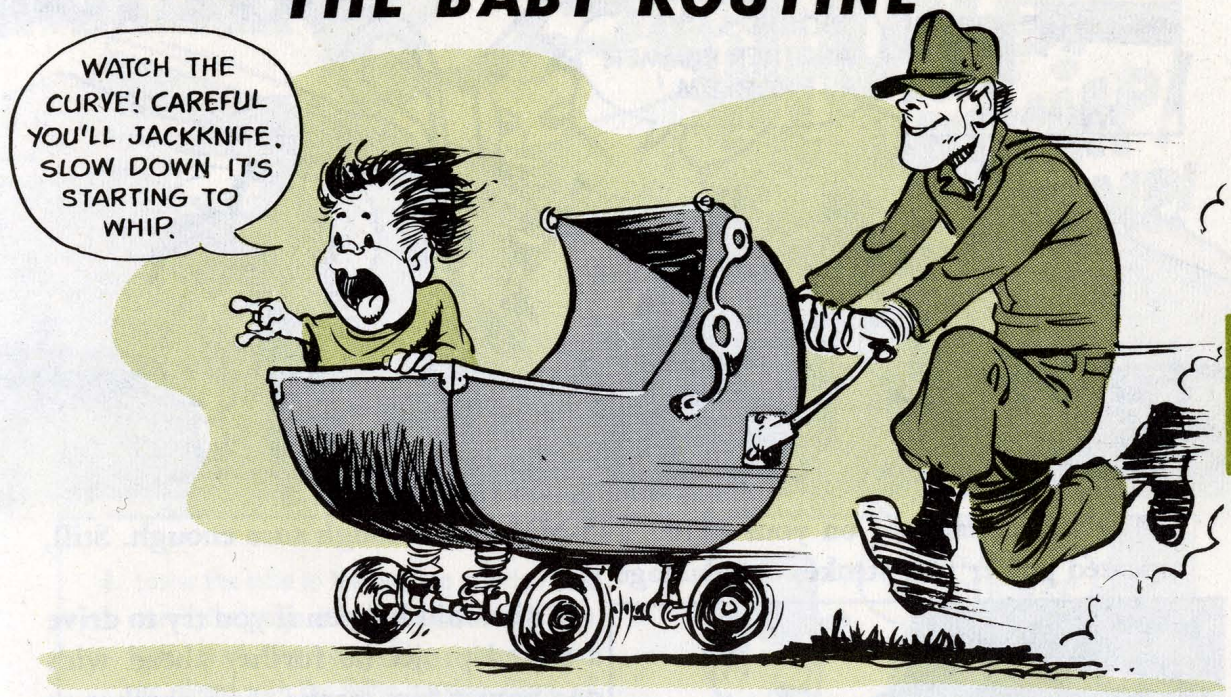
The lube also helps you by cutting rust or corrosion. So, taking the horn button assembly apart should be a snap the next time.

TURN SIGNAL COVER

Are you missing the green turn signal indicator cover lens on your late model M151-series ¼-ton truck? Get a new one with FSN 6220-181-2388, which includes a washer and O-ring.

GIVE YOUR TRAILER . . .

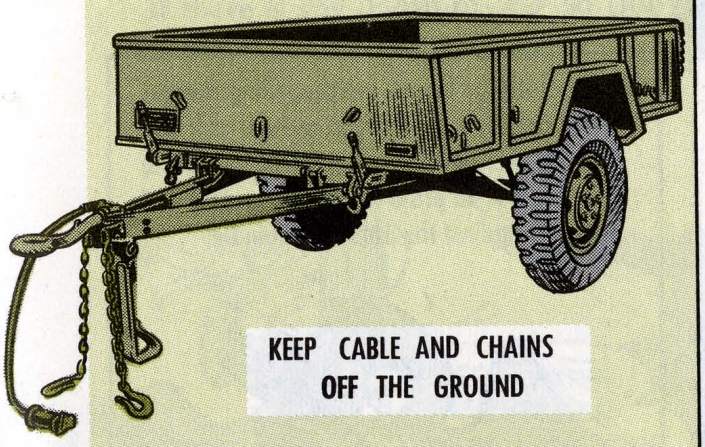
THE BABY ROUTINE



Towing your trailer is a tricky task.

That extra vehicle, big or small, demands all your attention — before you take off and while you're on your mission.

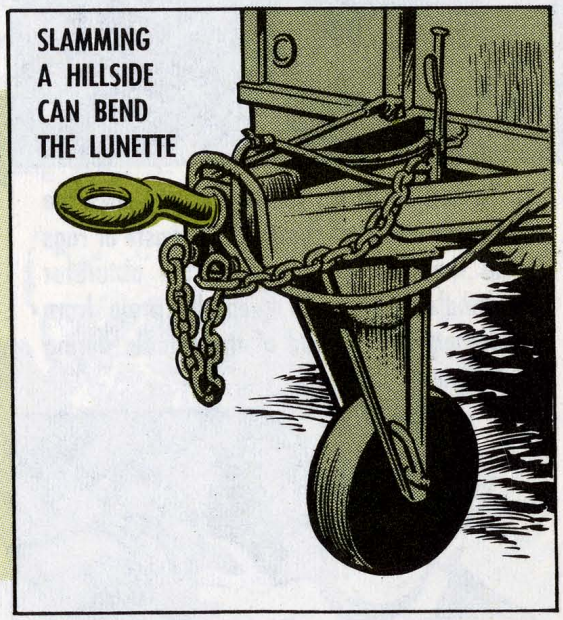
The M101A1 ¾-ton 2-wheeler is a good example.



You've got maintenance to do before you wheel away, like it says in TM 9-2330-202-14P (Aug 62). Then, after that's done, you gotta handle it like a little baby.

— Never jackknife it; you may crack the drawbar.

— Be alert. Don't slam a hillside. You'll bend the chassis or body or lunette.

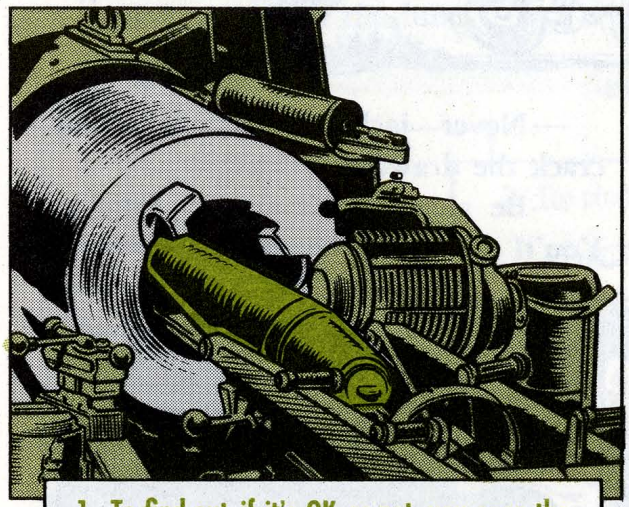


— And never, never whip it sharply around a curve.

Be sharp and get with it. Give your trailer the PM treatment it deserves.

SAVE YOUR

The loader-rammer on your M107 175-MM gun is tough sure enough. Still, repeated power ram strokes can damage it.



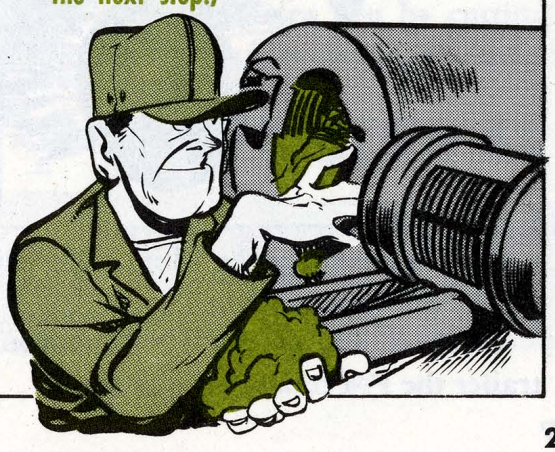
This could happen if you try to drive a seated projectile further ahead with one power ram stroke after another to get your depth of ram at 58¾ inches or more.

Looking for a better way?

Give your projectile the gravity test.

This is the way it works . . . If your projo is seated but the depth of ram is less than 58¾ inches, it might (or might not) be OK to fire.

1. To find out if it's OK or not, you open the breech and stuff some cotton waste or rags in the chamber ahead of the obturator spindle. (This is to keep the projo from damaging the head of the spindle during the next step.)



2. Now lock the breech (no propelling charge) and rapidly raise the gun as high as it will go. In this position gravity will be pulling on the 147-lb projo trying to unseat it and slam it against the obturator spindle.

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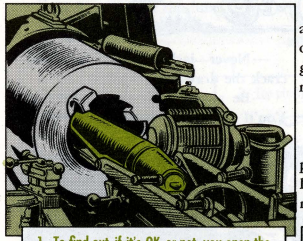

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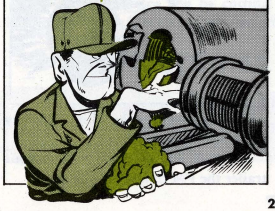

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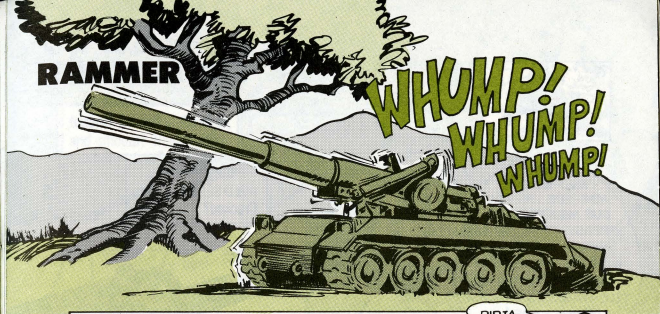

3. Lower the tube to the loading position and see if the projo is still seated. If it is you can load the propelling charge and go ahead with the firing mission. (First, of course, you'll pull out the cotton waste or rags that you used to protect the obturator spindle.)

If the projo has dropped back out of the ram position you can try to ram it again provided the rotating band and forward bourrelet are both undamaged and there is no crud in the chamber or forcing cone.

If there is any damage or if you can't seat the projo on the second try, set it aside for the EOD people to Do Their Thing with it.

The gravity test will keep you from overworking your rammer which is good because repeated extra hard ramming puts a lot of force on the cam follower. Too much force on the cam follower will sooner or later break your gear case and leave you with a ram stroke cycle that won't ram anything.

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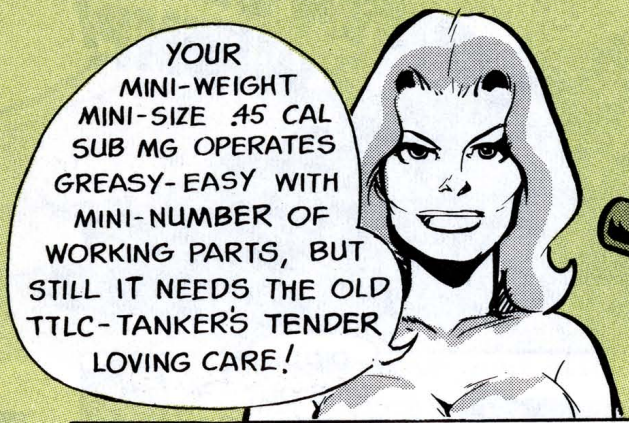
BE YOUR OWN INSPECTOR M3/M3A1 .45-Cal

SUBMACHINE



SIGHTS — Burred, twisted, missing?

WELD SEAMS — Cracked?

COVER — Fits snug, locks tight?

EXTRACTOR — Worn, broken, binds in bolt?

BOLT — Slides freely? No burrs?

SEAR — Worn, burred? Check that all components are in the weapon: extractor, extractor pin, guide, retaining clip, driving springs.

MAGAZINE — Clean? No cracks, dents allowed. Catch worn? Magazine fits smoothly, stays in receiver? Follower worn or burred?

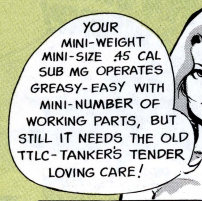
BARREL BUSHING THREADS — Must be clean — not battered or burred. Here's the most likely spot for goof ups, when you check the barrel locking spring it must contact the barrel collar. No gap allowed.

A loose, flopping barrel can come unglued — do a split from the receiver. Hangup? You bet!

NOTE: You can screw the barrel into the receiver without depressing ratchet spring, but NEVER UNSCREW the barrel without depressing the spring. A worn-out spring lock grip and you'll get too much headspace. A missfire, or worse.

BE YOUR OWN INSPECTOR M3/M3A1 .45-Cal

SUBMACHINE GUN . . .



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GUIDE RODS — Straight and smooth? Held tight in retaining plate?

RECEIVER — Dents, cracks?

BARREL — Any bulges, deep pitting, bends, scarred lands? Yelp for help . . . from the armorer.

EJECTOR — Bent or broken?

HOUSING — Makes a good tight fit on the receiver?

OILER — Threads stripped? No leaks allowed (M3A1).

STOCK EXTENSION — Straight? Catch holds stock tight — telescoped or extended? No waggles allowed.

HAND LOADER AND CLEANING ROD STOP (M3A1) — Straight? If cracked or missing, see your armorer.

TRIGGER GUARD — Fits tight?

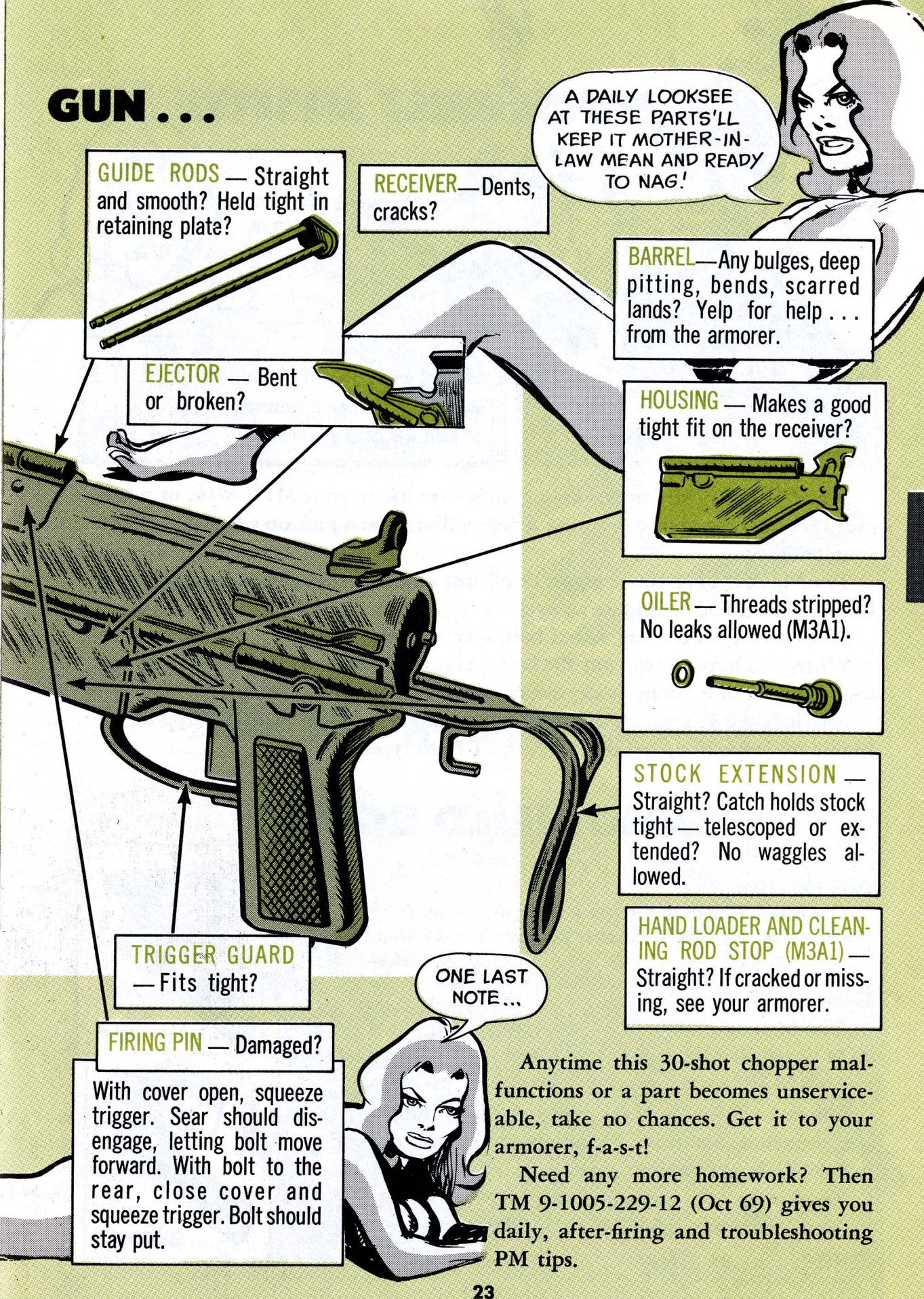
FIRING PIN — Damaged?

With cover open, squeeze trigger. Sear should disengage, letting bolt move forward. With bolt to the rear, close cover and squeeze trigger. Bolt should stay put.

Anytime this 30-shot chopper malfunctions or a part becomes unserviceable, take no chances. Get it to your armorer, f-a-s-t!

Need any more homework? Then TM 9-1005-229-12 (Oct 69) gives you daily, after-firing and troubleshooting PM tips.

GUN . . .



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RIFLE BOLT MISFITS

Never pick up a stranger — bolt, that is — to use in your M14, M16, or whatever. Like maybe you're cleaning a Sweet Sixteen and pick up a look-alike bolt. It seems to fit.

Trouble is, the headspace might be off just a hair . . . enough to cause problems, like a misfire. You could lose an eye!

Same-same goes for any mixed bolt/receiver combo.

When you have to take out the bolt, print your rifle's receiver SN on tape and stick it to the bolt. Stops mocky-nicky, mis-matchups every time.

Anytime you mix up bolts, you gotta turn in your rifle to direct support for headspace inspection, and that's a fact, 11-Bush types.

UNMODIFIED BOLTS?

Dear Half-Mast,

Our M14 riflemen are losing bolt extractors while firing blank ammo. Why this split off? Better yet, how can we stop it?

CW4 W. H. J.

Dear Mr. W. H. J.,

You're losing unmodified extractors, Sir. These original M14 items have a sharp-pointed lower front corner that snags the round as it comes from the chamber or magazine.

Check your M14's. If the extractors have this sharp point, get your unit armorer to file off about 1/64-in of metal with a fine file or sharpening stone.

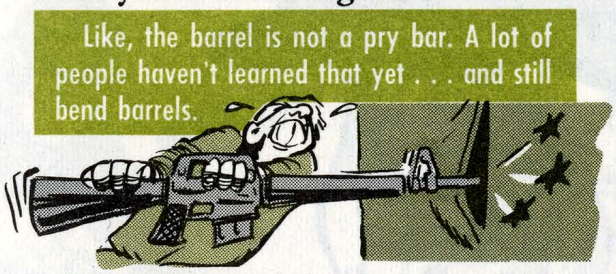
Same poop goes for units firing blank ammo in M14A1's.

New extractors, FSN 1005-953-9504, come with corners burred.

Half-Mast

M16 SHORT SHOTS

Zapping some short-sighted uses of your M16A1 rifle can keep you healthy while you're becoming a short-timer.

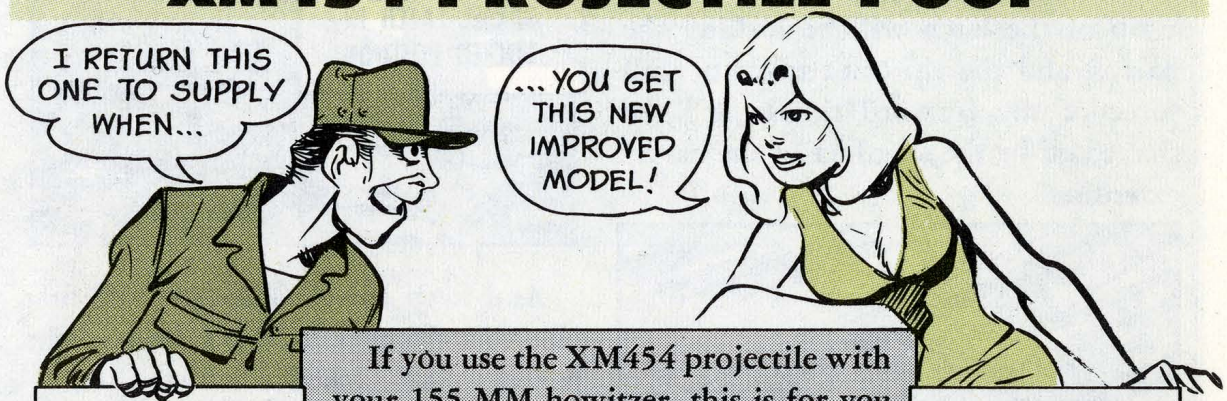


Forgetting to lube your rear sight, per the TM, can freeze the sight. Kind of ridiculous, and uncomfortable, having a frozen rear sight in sunny Vietnam.

Bolts and bolt carriers are not for dropping. Either can get burred, or you can bend the carrier key. Handle the carrier with care, bolt-wise and otherwise.

M109, M114A1, M123A1 HOWITZERS

XM454 PROJECTILE POOP



If you use the XM454 projectile with your 155-MM howitzer, this is for you . . . Order the new T-4179A cable assembly which replaces the T-4179 cable on a one-for-one basis.

FSN 1190-018-8551 gets you this improved model which works better.

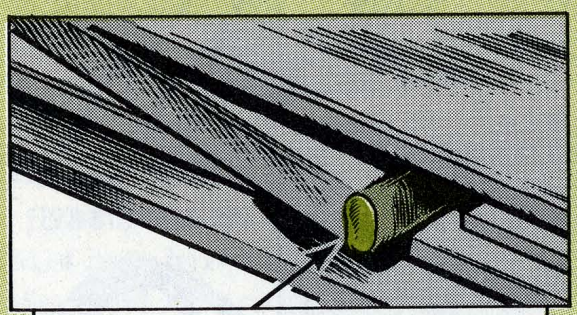
However, when you get the new cable, the old one, T-4179, FSN 1190-856-9319, becomes excess and has got to be turned back to supply.

FAST-FIRING GRENADIERS . . . WATCH THAT

Sure—you can fire your M203, 40-MM grenade launcher as fast as you can load it. But, you'll not be firing it for long if you keep your thumb on the barrel latch while you're firing.

Here's how come:

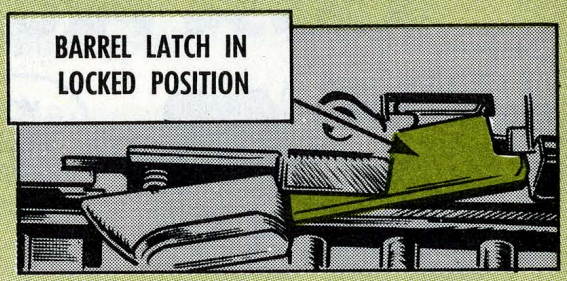
When you hang on to the latch the barrel won't be completely locked. Only a tip of the latch will be locking the barrel, and the tip can't take the full force of the forward thrust. It'll be shaved off by the shoulder of the barrel extension.



BARREL LATCH DAMAGE

Once the latch is damaged the barrel won't lock right, and that'll foul up the launcher's headspace. With incorrect headspace you'll get blown primers. Pieces of brass from the primers will collect in the firing pin housing, and you'll soon be sweating out firing failures.

So train yourself right: Soon's the barrel is locked slide your thumb down to the handgrip, and keep it there until you're ready to unlock the barrel again.



And keep this in mind—your first clue to a chipped latch is failure of the barrel to stay locked when you fire.

CARTRIDGE LOCATOR AND EJECTOR LUBING

When you lube the barrel assembly pay special attention to the cartridge locator. If the locator starts sticking it won't hold the cartridge tight against the breech. That'll also give you headspace trouble and blown primer problems.

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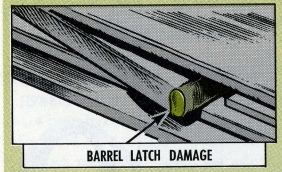

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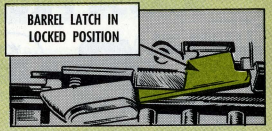

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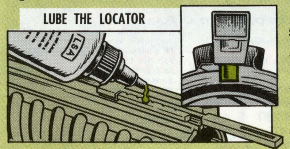
All you have to do is squirt some LSA over and around the locator. Some launchers have 3 small holes along the top of the barrel extension, so be sure to squirt some LSA in there, too. Then press the locator in several times (with your cleaning rod or a similar tool) to make sure it's not stuck.



Do the same for the ejector. If it gets stuck or sluggish it'll slow down your loading and firing—but good.

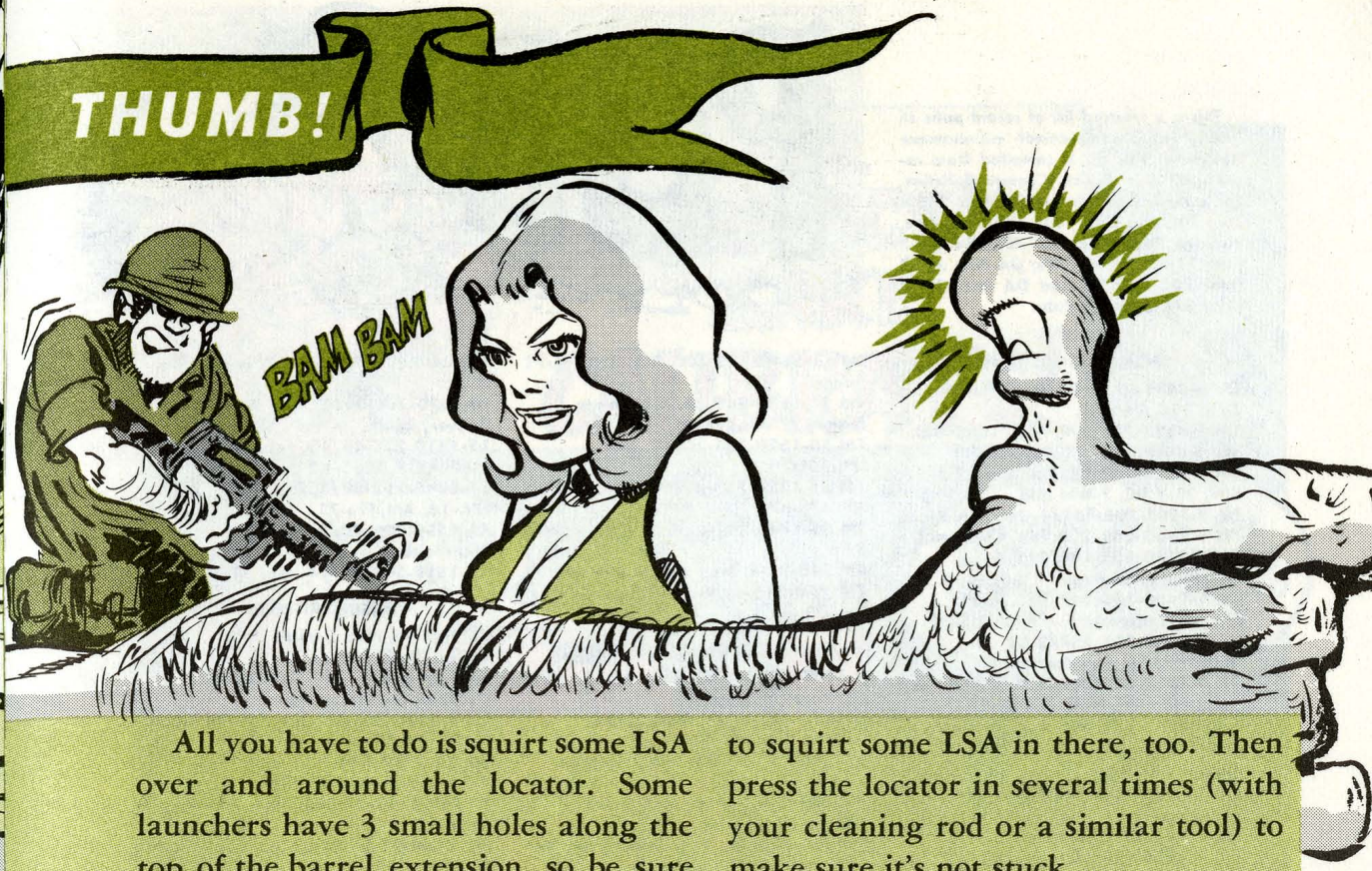
Go ahead and check the locator and the ejector right now . . . and then check 'em each time you pull PM on your launcher.

LAUNCHER WARNING

Listen to this warning and you won't be mourning: Make sure the sling is clear of the muzzle before you fire.

The sling can slip in front of the muzzle when you have the sling fully extended.

If you fire when the sling is in the way all sorts of interesting things can happen—none of 'em good. So beware.



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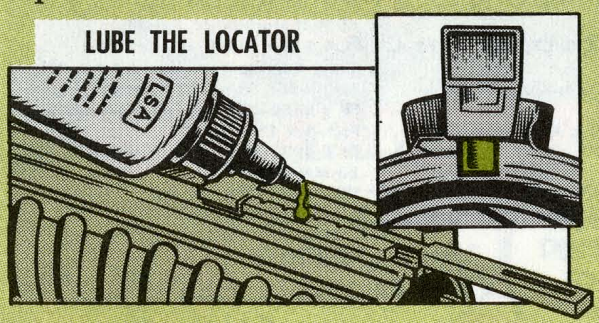

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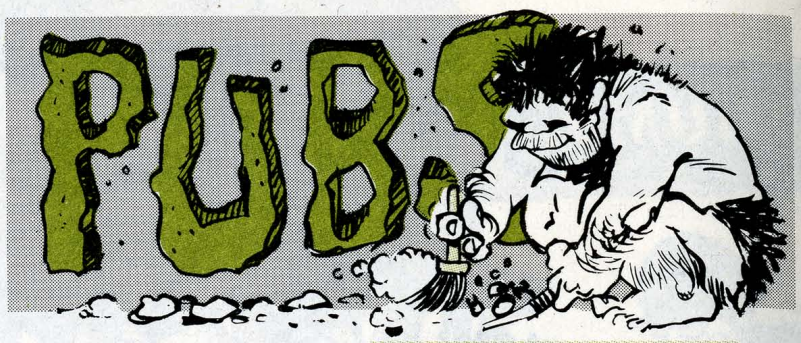


This is a selected list of recent pubs of interest to organizational maintenance personnel. This list is compiled from recent AG Distribution Centers Bulletins. For complete details see DA Pam 310-4 (Jun 70), and Ch 3 (Dec 70), TM's, TB's, etc.; DA Pam 310-6 (Jul 70), and Ch 3 (Apr 71), SC's and SM's; DA Pam 310-7 (Nov 70), MWO's; and DA Pam 310-9 (May 69), COMSEC Pubs.

TECHNICAL MANUALS

TM 5-3431-221-25P, Mar, Welding Gen, 300-Amp DC.
TM 5-3825-223-20P, Mar, 1000-Gal Water Distributor.
TM 5-6115-440-20, Feb, Gen: 7.5-KW, 28-V DC, 2 Whl Mtd.
TM 9-1005-206-14P/1, Feb, Revolvers.
TM 9-1410-585-20P, Feb, Chaparral.
TM 9-1430-253-14P/2/1, Feb, Improved Nike-Herc.
TM 9-1450-500-24P, Dec, Hawk Loader-Transporter.
TM 9-2350-217-25P/2 C2, Jan, M108/M109, Howitzers.
TM 9-4935-255-34P/2, Feb, Hercules/Improved Nike-Herc.
TM 9-6920-375-20P, Feb, Pershing.
TM 10-3930-618-10, Feb, Fork Lift Truck, 6,000-Lb.
TM 10-3930-618-20, Feb, Fork Lift Truck, 6,000-Lb.
TM 11-1520-221-20, Feb, AH-1G.
TM 11-5805-555-15, Jan, MD-773/GCC, MD-774/GCC, MD-775/GCC.
TM 11-5810-276-ESC, Feb, Electronic Key Generators.
TM 11-5810-277-ESC, Feb, Electronic Key Generator.
TM 11-5820-334-ESC, Feb, R-392/URR Radio Set.
TM 11-5820-518-20P, Apr, Radio Sets AN/ARC-51X, AN/ARC-51BX.
TM 11-5820-520-12, Feb, AN/GRC-106 Radio.
TM 11-5840-252-20P, Feb, AN/FPS-71 Radar.
TM 11-6130-269-15, Feb, Power Supply PP-4841(P)/U
TM 55-1520-224-20PMI, Mar, OH-13EGH.
TM 55-1520-227-20PMP, Feb, CH-47B-47C.
TM 55-1740-201-23P, Mar, All F/W & R/W.
TM 740-90-1, Mar, Admin Storage.
TM 750-245-4, Jan, All missile rocket units.

MODIFICATION WORK ORDERS

9-1100-227-20/5, Mar, XM15, ADM Training Equip.
9-1240-312-40/1, Mar, M551, Assault Vehicle.
9-1400-250-30/55, Feb, Imp Nike-Herc.
9-1450-500-30/10, Mar, Hawk Loader-Transporter
9-2300-398-30, Apr, Semitrailer, Van M313 and M292-Series.
9-2300-401-20/1, Mar, Chaparral & Hawk.
9-2320-206-30/10 C1, Mar, M123 & M125 trucks.
9-2350-217-30/26, Mar, M109 Howitzer.
9-2350-242-40/1, Mar, M88 VTR.
9-2520-238-30/2, Mar, Chaparral & Hawk.
9-4935-306-30/5, Mar, Sergeant.
9-4940-253-30/1, Mar, Nike-Herc.
9-6650-215-40/1, Apr, Binocular IR M18.
10-1670-206-30/6, Mar, Aerial Delivery Equip.
11-5810-225-45/13, Feb, Comsec TSEC/KY-3, TSEC/KY-3A.
11-5840-252-30/7, Feb, Radar, AN/FPA-16, AN/FPS-71.
55-1510-202-30/9, Mar, O-1 Transponder.
55-1510-209-30/14, Mar, U-21.

MISCELLANEOUS

AR 750-37, Mar, Sample Data Collection, TAMMS.
DA Pam 750-1, Jan, Commander's Guide of PM Indicators.
LO 9-2320-206-12, Jan, 10-Ton Truck, M123, M125 series.
LO 10-3930-624-12-1 and 12-2, Feb, Truck, Lift, Fork; 6,000 Lb.
SB 740-6135-91-001, Mar, Missile Batteries.
SC 5180-91-CL-S04, Apr, Tool Equip TE-27A.
SC 5180-99-CL-A01, Mar, Tool Kit, Aircraft Mechanic's, General.
TB 9-2300-295-15/7, Apr, Warranty GM 3-53 diesel engine for Truck, 1¼ Ton, M561 Truck, M792 Amb.
TB 9-2300-402-10, Feb, Vehicle Air Pollution Controls.
TB 9-4931-334-14, Mar, XM163 20-MM Gen.
TB 9-4931-347-14, Mar, XM163 and XM167 20-MM Gen.

CDV Guidelines

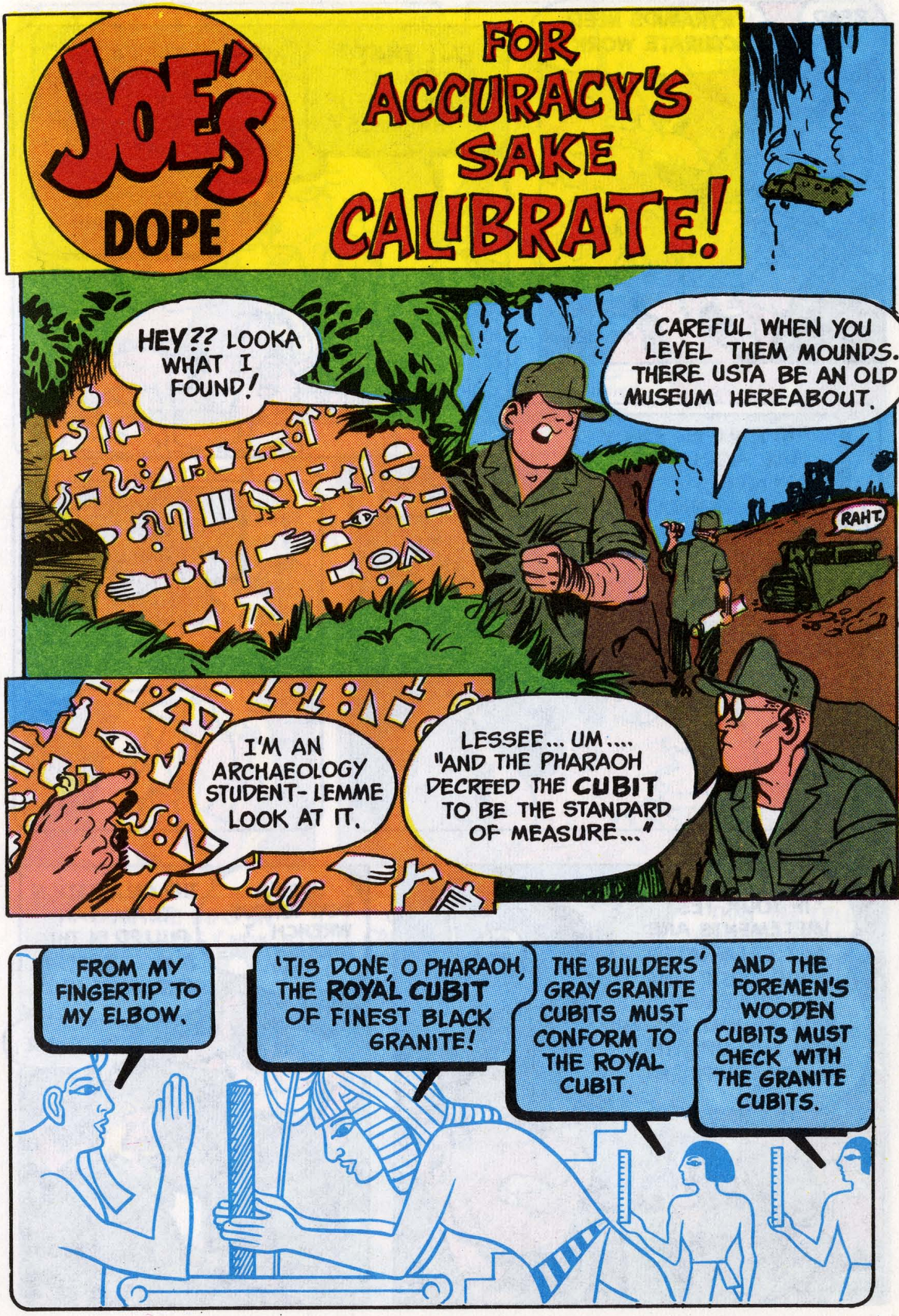
Got a mixed bag of commercial design vehicles in your maintenance shed? Then make sure you scan thru AR 700-88 (Jan 71). It tells you about repair parts, warranties, repair limits and reports.

PM Commander's Guide

Keep your eagle eye peeled for the new DA Pamphlet 750-1 (Jan 71), Commander's Guide of Preventive Maintenance Indicators. It's loaded with good info.

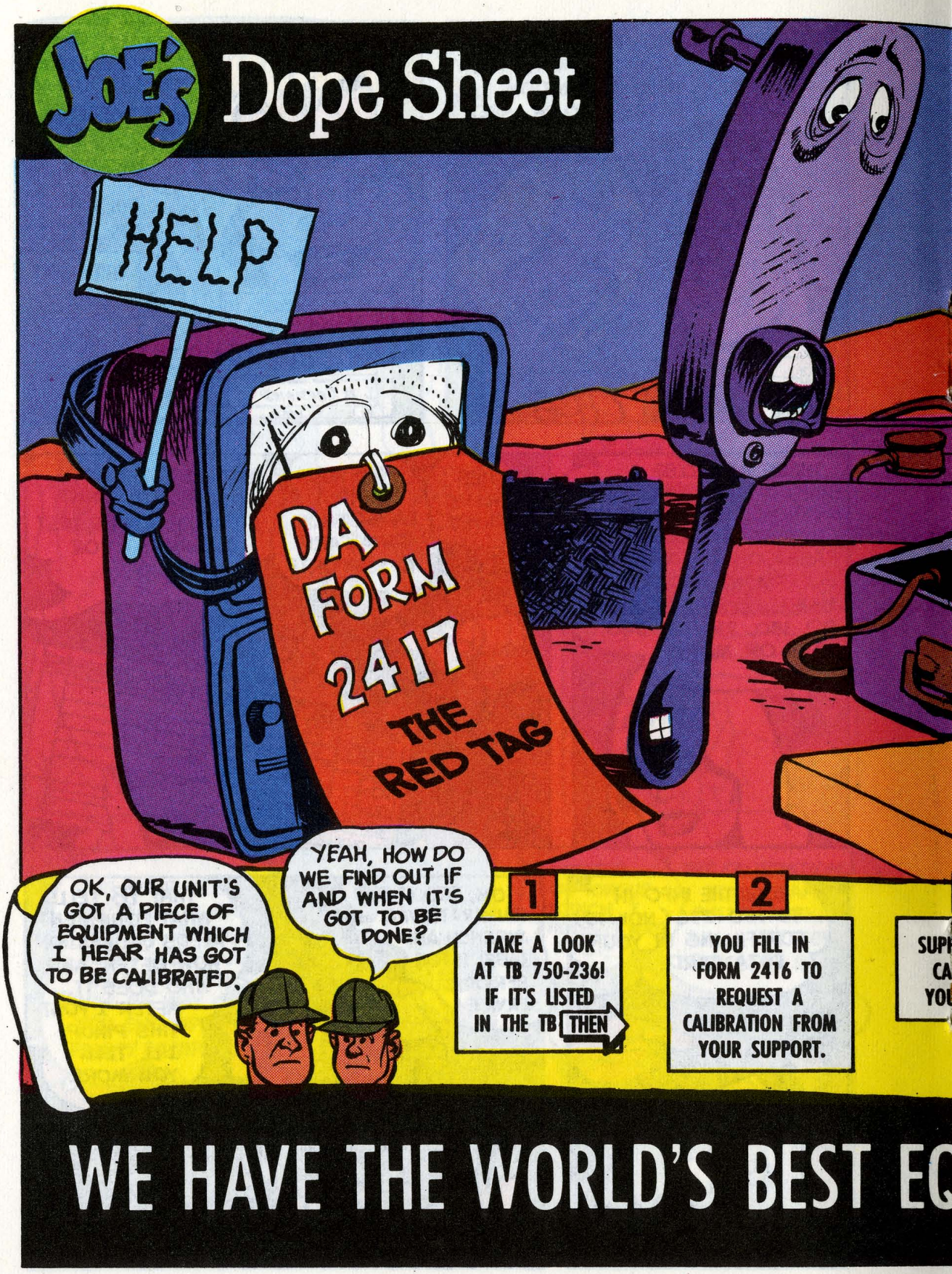
MWO of the MONTH

Weep no more — there're still plenty free kits to give your 100-KW, 60-Hz, generator set (Model HB 3333) the extra support it needs. MWO 5-6115-428-20/1 (Aug 68) gives an additional crossmember to prevent collapse during transportation and rough handling.

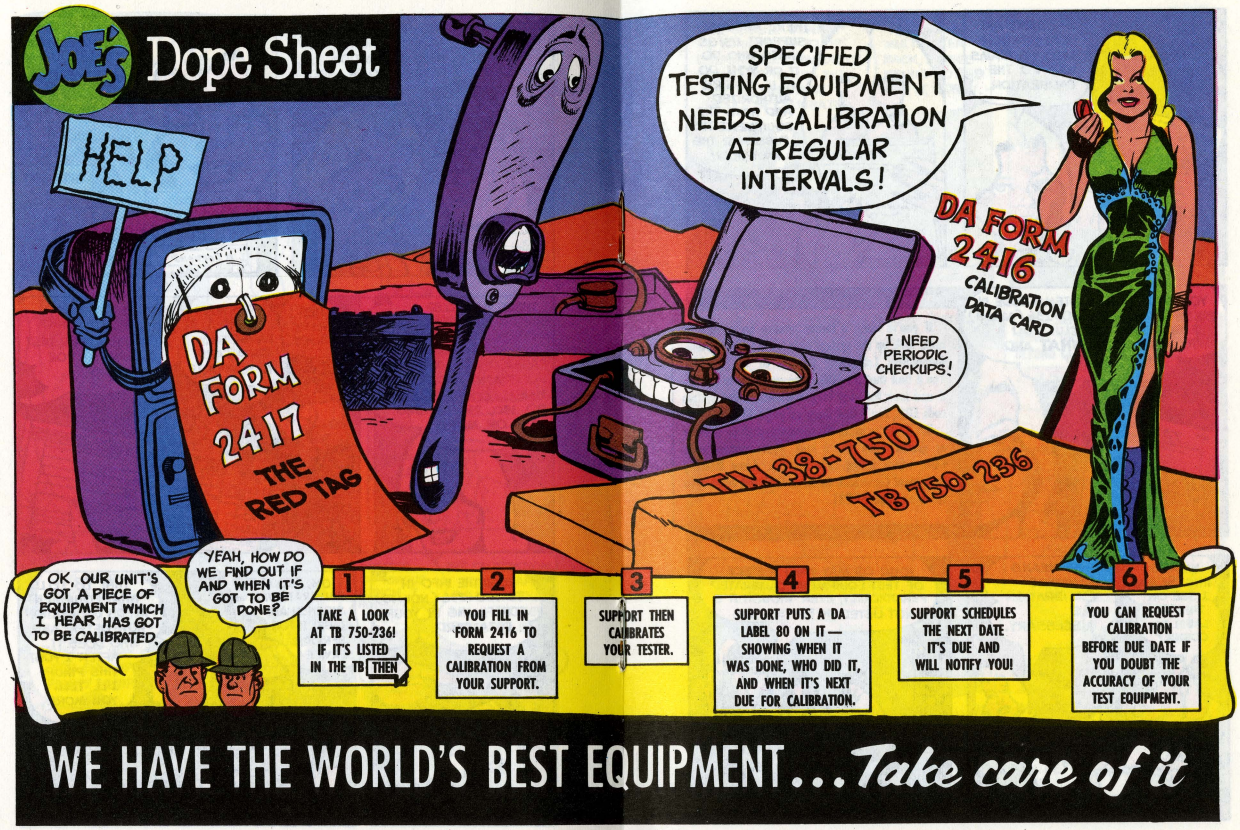

JOE'S DOPE
FOR ACCURACY'S SAKE CALIBRATE!
HEY?? LOOKA WHAT I FOUND!
CAREFUL WHEN YOU LEVEL THEM MOUNDS. THERE USTA BE AN OLD MUSEUM HEREABOUT.
RAHT
I'M AN ARCHAEOLOGY STUDENT- LEMME LOOK AT IT.
LESSEE... UM.... "AND THE PHARAOH DECREED THE CUBIT TO BE THE STANDARD OF MEASURE..."
FROM MY FINGERTIP TO MY ELBOW.
'TIS DONE O PHARAOH, THE ROYAL CUBIT OF FINEST BLACK GRANITE!
THE BUILDERS' GRAY GRANITE CUBITS MUST CONFORM TO THE ROYAL CUBIT.
AND THE FOREMEN'S WOODEN CUBITS MUST CHECK WITH THE GRANITE CUBITS.

READ ON!
"PYRAMIDS NEED ACCURATE WORK..."
CALL THAT A PYRAMID? WHOSE GOOFUP IS THAT MESS?
HERE IS THE JACKAL WHO STORED THE WOOD CUBITS IN THE DEEP TOMBS! THE DAMP WARPED 'EM!
THEY LOOKED OK TO ME!
THE RULE IS: EVERY FULL MOON THE FOREMEN'S CUBITS WILL BE CALIBRATED!!
CALIBRATED??
CHECKED WITH THE GRAY GRANITE.
50 LASHES WITH HIS OWN ROTTEN CUBIT AND BANISHED TO THE ROCK QUARRY!
"IF YOUR TEST IMPLEMENTS ARE NOT CALIBRATED, YOUR TESTS AND MEASUREMENTS WILL BE WAY OFF AND YOU END UP WITH FAULTY EQUIPMENT!"
OH UH
HERE'S THAT TORQUE WRENCH I THOUGHT WAS LOST!
THE CALIBRATION TEAM VAN PULLED IN THIS A.M. — BETTER CHECK IT IN...
HI, CONNIE.

IT STILL WORKS--THE NEEDLE MOVES...
BUT IT CAN GIVE FALSE READINGS NOW! IT MAY NEED CALIBRATION. THERE'S NO DA LABEL 80 ON IT.
DA LABEL 80 ON EQUIPMENT TELLS YOU--
WHO DID THE CALIBRATION
WHEN IT WAS DONE
WHEN NEXT DUE
U.S. ARMY CALIBRATION SYS
80009-330
1240
168
1060
I.M. CERTIFIED
WLEX04
THERE HAS TO BE A SCHEDULE FOR THAT CALIBRATION... IT CAN'T BE HIT OR MISS! A GOOD SCHEDULE'S BASED ON THE KIND OF EQUIPMENT AND HOW IT'S USED... COULD BE EVERY 90, 180, 270 OR 360 DAYS OR MORE!
THIS NEEDS SERVICE.
DID YOU SEND A CALIBRATION DATA CARD TO SUPPORT?
THAT'S DA FORM 2416, A PUNCH CARD THAT IDENTIFIES YOUR TEST EQUIPMENT FOR SERVICE.
USE THE INFO IN TB 750-236 (NOV 70) FOR FILLING IN YOUR DATA CARD.
TB 750-236
OK, TROOP, I'LL CALIBRATE YER WRENCH AND LABEL IT FOR PERIODIC SERVICE!
THAT TB TELLS WHAT EQUIPMENT NEEDS CALIBRATION, HOW OFTEN AND WHO DOES IT... AFTER I POST THIS PINUP, I'LL TELL YOU MORE.



IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BU



IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BULLETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.

QUIPMENT... *Take care of it*

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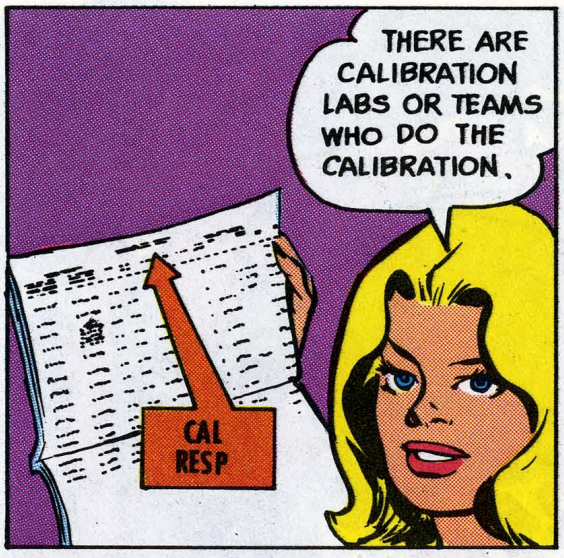
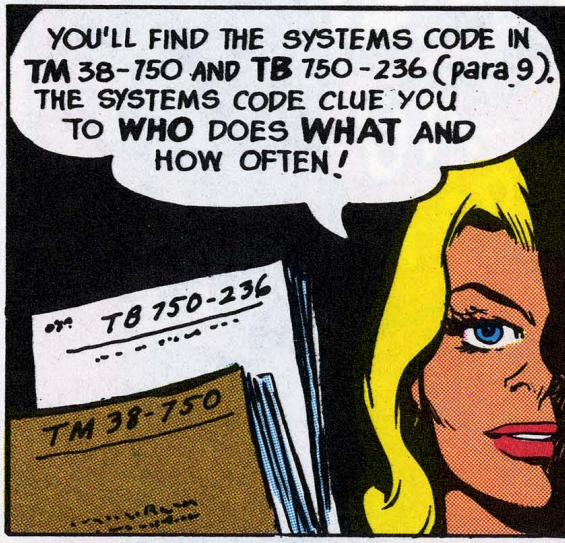
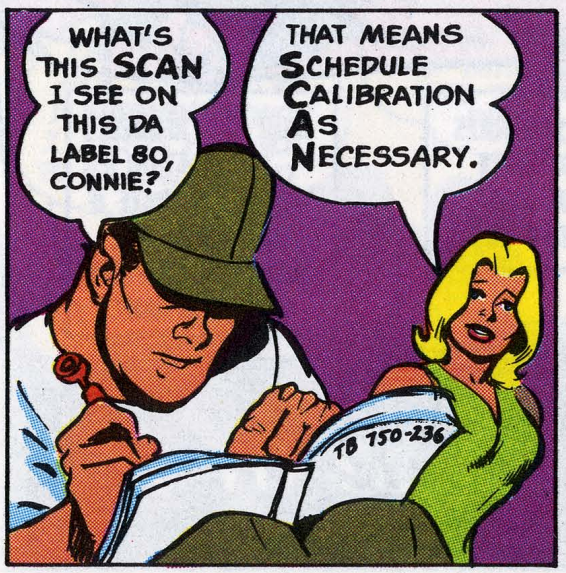
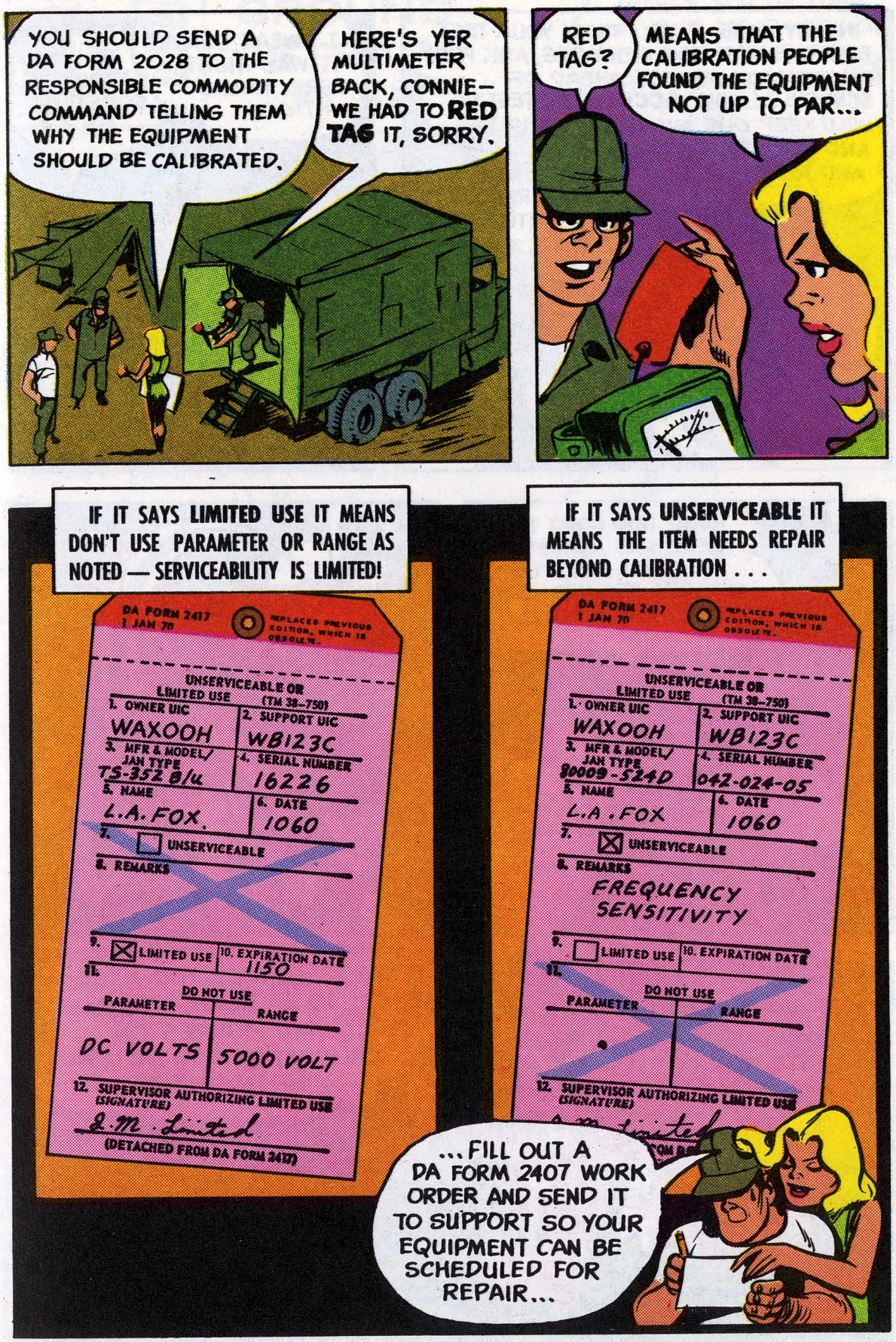




If you're using a torque wrench on a truck or tank, look up the system code for U.S. Army Tank-Automotive Command, General in TB 750-236. You'll find that it's E00. Then you turn to Section II and look for your torque wrench under system code E00. You'll find them on page 11-230.

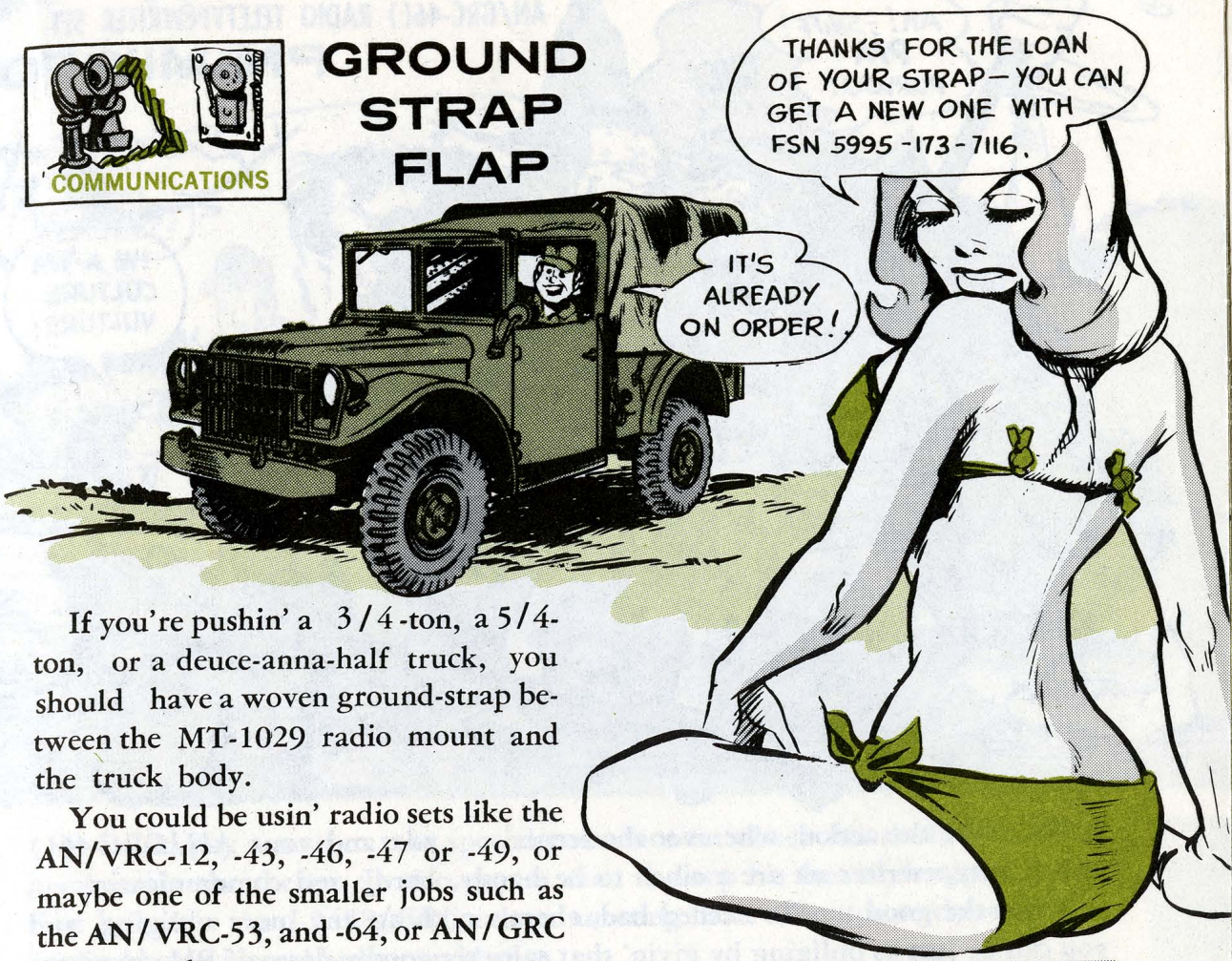
But if you're using the torque wrench on a dozer or grader, then you'd look under system code G00, which is the code for U.S. Army Mobility Equipment Command, General. Their test equipment starts on page 11-231.




YOU SHOULD SEND A DA FORM 2028 TO THE RESPONSIBLE COMMODITY COMMAND TELLING THEM WHY THE EQUIPMENT SHOULD BE CALIBRATED.
HERE'S YER MULTIMETER BACK, CONNIE— WE HAD TO RED TAG IT, SORRY.
RED TAG?
MEANS THAT THE CALIBRATION PEOPLE FOUND THE EQUIPMENT NOT UP TO PAR...
IF IT SAYS LIMITED USE IT MEANS DON'T USE PARAMETER OR RANGE AS NOTED — SERVICEABILITY IS LIMITED!
DA FORM 2417 1 JAN 70
REPLACES PREVIOUS EDITION, WHICH IS OBSOLETE.
UNSERVICEABLE OR LIMITED USE (TM 38-750)
1. OWNER UIC WAXOOH
2. SUPPORT UIC WB123C
3. MFR & MODEL/ JAN TYPE TS-352 B/U
4. SERIAL NUMBER 16226
5. NAME L.A. FOX.
6. DATE 1060
7. ☐ UNSERVICEABLE
8. REMARKS
9. ☒ LIMITED USE
10. EXPIRATION DATE 1150
11. DO NOT USE
PARAMETER: DC VOLTS
RANGE: 5000 VOLT
12. SUPERVISOR AUTHORIZING LIMITED USE (SIGNATURE) L.M. Littel
(DETACHED FROM DA FORM 2417)
IF IT SAYS UNSERVICEABLE IT MEANS THE ITEM NEEDS REPAIR BEYOND CALIBRATION . . .
DA FORM 2417 1 JAN 70
REPLACES PREVIOUS EDITION, WHICH IS OBSOLETE.
UNSERVICEABLE OR LIMITED USE (TM 38-750)
1. OWNER UIC WAXOOH
2. SUPPORT UIC WB123C
3. MFR & MODEL/ JAN TYPE 80009-521D
4. SERIAL NUMBER 042-024-05
5. NAME L.A. FOX
6. DATE 1060
7. ☒ UNSERVICEABLE
8. REMARKS FREQUENCY SENSITIVITY
9. ☐ LIMITED USE
10. EXPIRATION DATE
11. DO NOT USE
PARAMETER
RANGE
12. SUPERVISOR AUTHORIZING LIMITED USE (SIGNATURE)
...FILL OUT A DA FORM 2407 WORK ORDER AND SEND IT TO SUPPORT SO YOUR EQUIPMENT CAN BE SCHEDULED FOR REPAIR...

IN ANY CASE, IF YOU THINK YOUR TEST EQUIPMENT'S NOT BEHAVING, ASK FOR CALIBRATION SERVICE AHEAD OF SCHEDULE! ONLY ACCURATE TESTING WILL KEEP OUR MISSILES, VEHICLES AND AIRCRAFT SAFE AND READY TO GO!
IT SOUNDS LIKE YOU'RE READING THE PRINTING ON THE ROCK WE DUG UP IN THAT MOUND.
YEH.
I SWEAR, CONNIE, IT WAS RIGHT HERE! WHERE'D IT GO?
TELL ME ABOUT IT SOMETIME, OK?
HMM! HOW COME THAT THERE WAS A MUSEUM WITH THIS TYPE OF MATERIAL AROUND HERE? IT DOESN'T MAKE SENSE!!
LOOK OUT
CRASH
WHAT'S IT SAY??
IT SAYS: "IT DOES TOO MAKE SENSE! SO HIT THOSE PUBS FOR FACTS AND FIGURES ON CALIBRATION — TB 750-236 AND TM 38-750."

GROUND STRAP FLAP

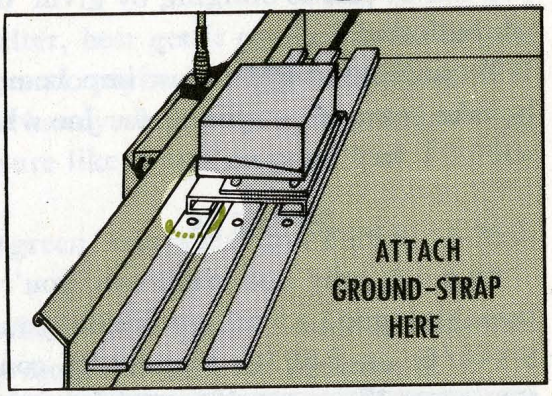


If you're pushin' a 3/4-ton, a 5/4-ton, or a deuce-anna-half truck, you should have a woven ground-strap between the MT-1029 radio mount and the truck body.

You could be usin' radio sets like the AN/VRC-12, -43, -46, -47 or -49, or maybe one of the smaller jobs such as the AN/VRC-53, and -64, or AN/GRC -125 or -160.

If you're minus the strap, here's how you get it:

Check SB 11-131 (Nov 68) for your radio and vehicle installation unit. The ground-strap (FSN 5995-173-7116), often referred to as "lead," should be included in the components listed for your installation setup. If it isn't, you don't need the strap.



4 MOVIES ON MOVING

The Army now has 4 new movies on packaging equipment for shipment —all available through your audio-visual support center. Here they are: TF 38-4132, Packaging for Return of Repairables; TF 38-4136, Blocking, Bracing and Cushioning Materials for Packaging; TF 38-4160, Packaging Line Equipment and Operation; and TF 38-4212, Military Packaging, Preservative Application. All are 16-MM color films.

Whatever the action, wherever the scene . . . you and your AN/GRC-46( ) radio teletypewriter set are a cinch to be handy, hardy and communicatin'.

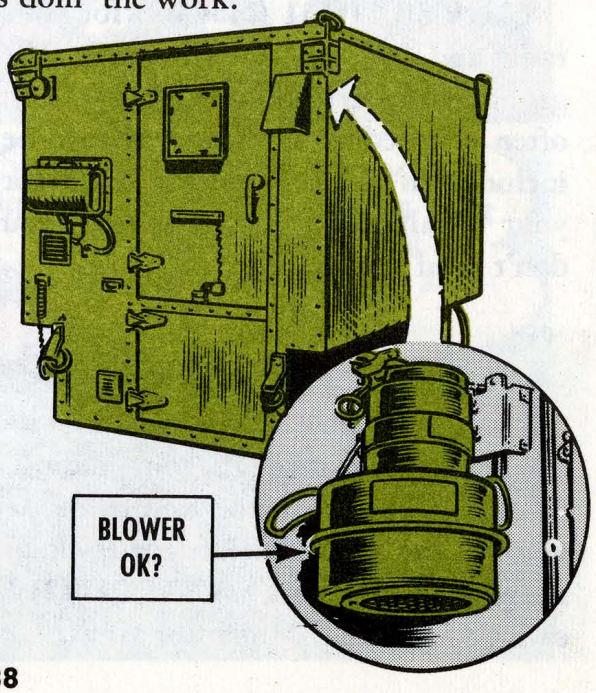
When the good word's needed bad, there's nothing any more obliging, and you can be just as obliging by givin' that salty set goodly doses of PM anywhere it's indicated.

What kind of PM's most important? All kinds, o'course — but, first **you** gotta be taken care of . . . you're the Joe who's doin' the work.

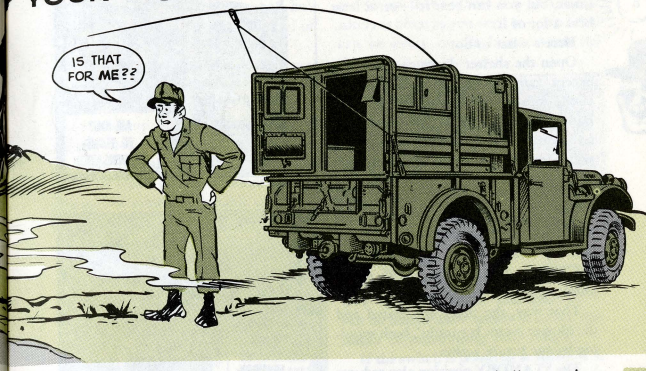
THE SHELTER

So-o-o-o, why not make sure you're breathin' good clear air inside your S-144/G or S-89/G shelter? If contaminants like type cleaner, ink eradicator, general cleaning compound and other compounds clog and cloy the atmosphere, use your shelter blower to blast those ferocious fumes with fresh air from outside.

Even if it's cool or hot air, still, it's fresh and breathable, right? Mighty fine personal PM.



AN/GRC-46( ) RADIO TELETYPEWRITER SET
PM MIX FOR YOUR "46"



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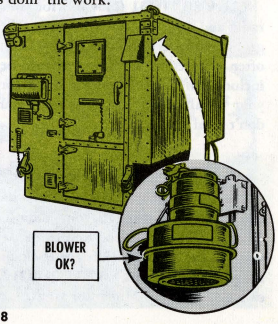


It would pay a man to take special pains not to whack his skull on various items inside the shelter. It also pays a man to keep his feet under control any time he's near the J-2498/GRC interconnecting box. The connections can be botched by accidental bumps and bangs.

If there's a break in the skin of your shelter, best get it patched before moisture has time to do its dirt to the shelter, and maybe its commo equipment. If you don't have the MK-680/G patching kit handy, slap some waterproof sealing tape over the puncture as a temporary measure like it says on page 9 of TB 750-240 (Jul 69).

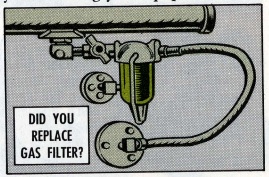
This tape goes by FSN 8135-269-8092 (green, 4-in wide) and FSN 8135-269-8094 (green, 6-in wide).

Never let a break or puncture go unpatched. Fix it quick. A sudden rainstorm or hailstorm could give you hard times by moisturizing your equipment.

Needin' heat and gettin' none?

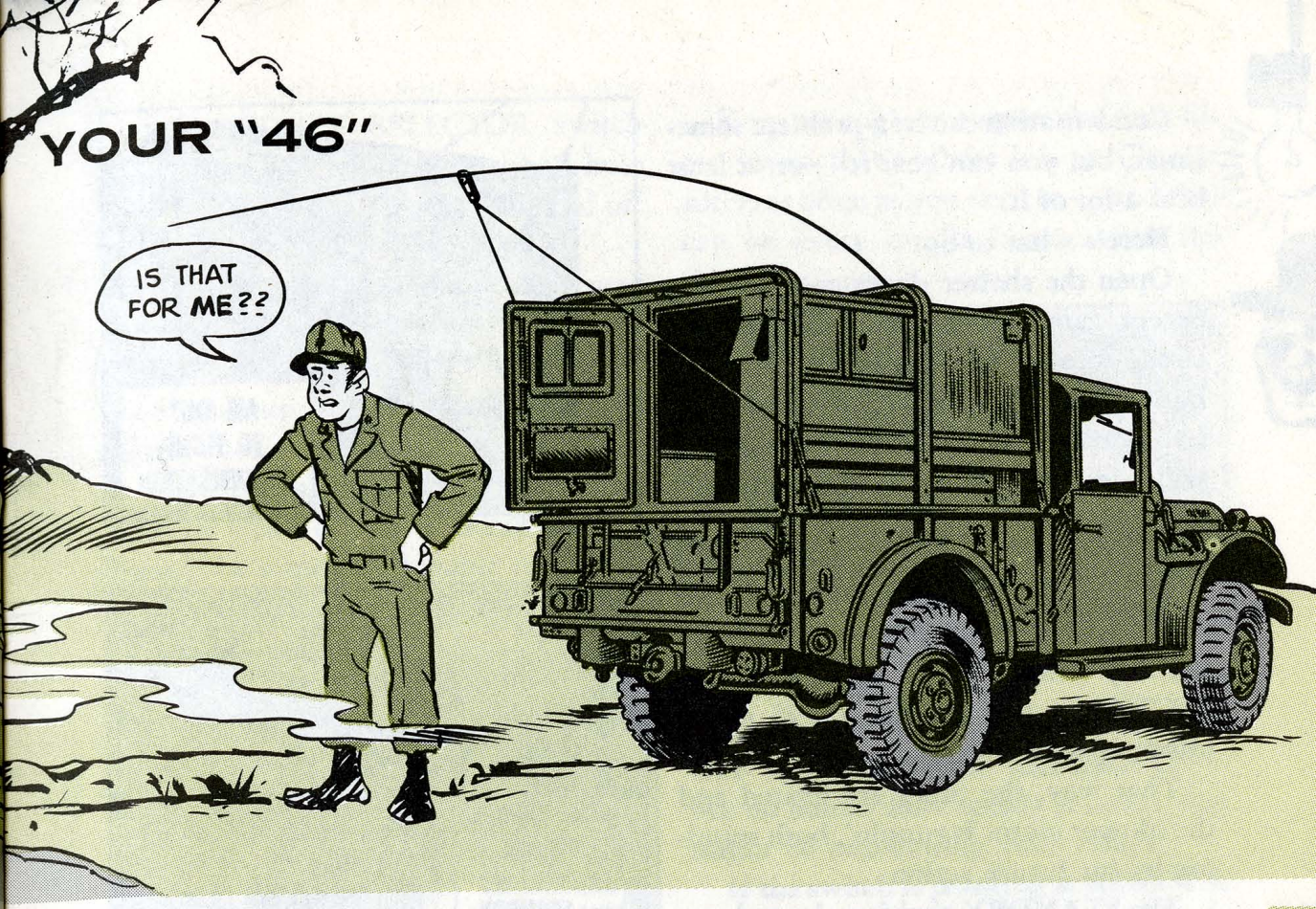
Could be you forgot to put back the gasoline filter after you cleaned it.

Without that filter, you can get a fuel line blocked with sediment or ice. And even if you don't need the heat, could be your equipment does. Like maybe the teletypewriter keys will turn frigid and stick.



PS MORE

YOUR "46"



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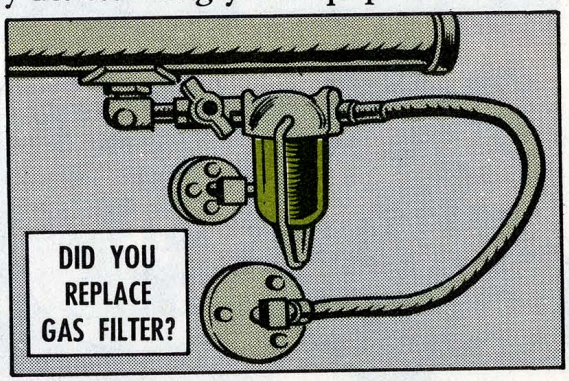
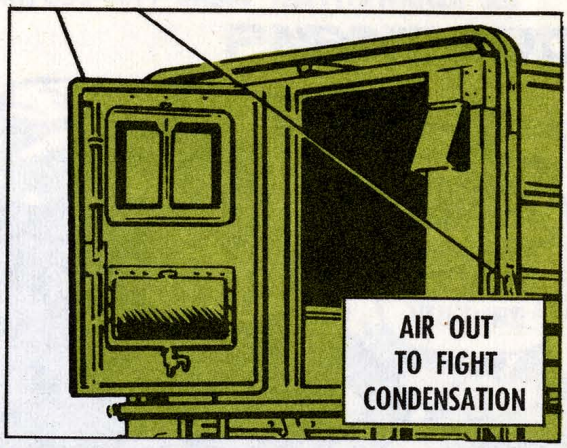


PS MORE

Condensation can be a problem sometimes, but you can beat it — or at least beat a lot of it.

Here's what to do:

Open the shelter doors every day — except rainy days — so fresh air can circulate and help move out the stagnant ozone. A 100- or 200-watt bulb left burning when the shelter's closed will also cut down the condensation.

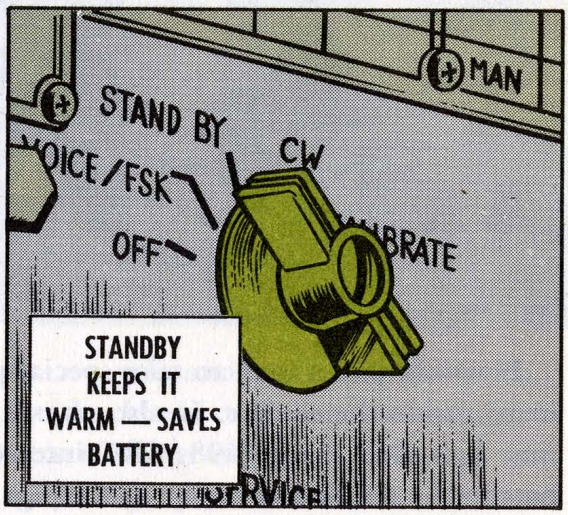


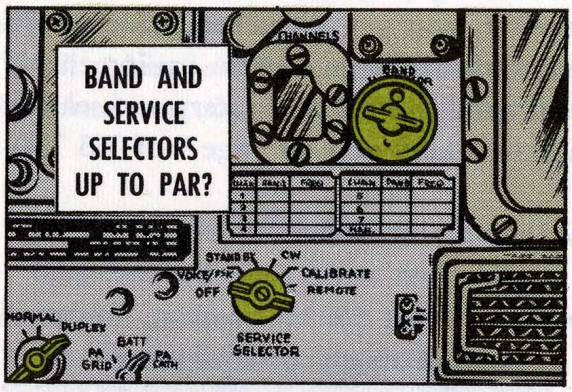
T-195 TRANSMITTER

Any time you're finished with your AN/GRC-19 radio set — at least temporarily — flick that SERVICE SELECTOR switch on the T-195 transmitter to STANDBY.

That way, the tubes are heated and the blower motor is runnin', both standing by for future action.

The STANDBY position also reduces the drain the radio set makes on the battery of your vehicle, and that keeps the set operatin' longer and better.

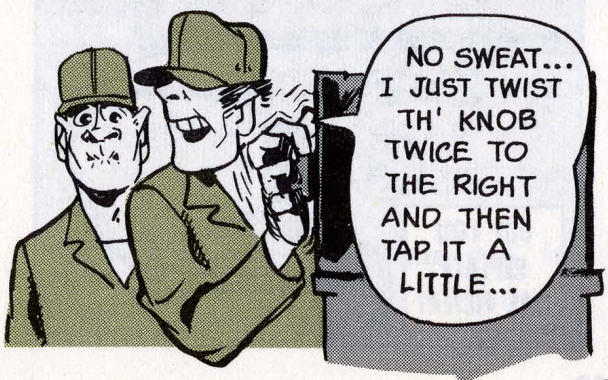




The T-195 may keep right on doin' you a job — but maybe it'd do a better job if the BAND SELECTOR control and SERVICE SELECTOR switch were replaced.

Whoa, now! Don't get it wrong . . . That doesn't mean to just go right out and get Support to replace some smooth-workin' pieces of equipment.

But . . . if the BAND SELECTOR is flush with the frequency you want, and you come up with . . . nothing, then you need a new control. Sure, you can probably wiggle it in the frequency by givin' the control a little twist to the left or right. But that kind of frequency selection can't help havin' a ????? quality about it.



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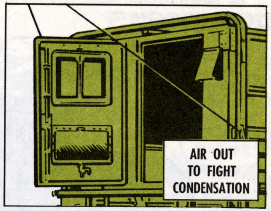

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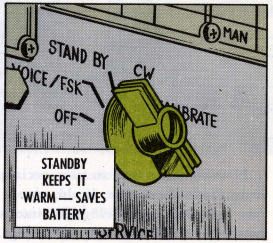
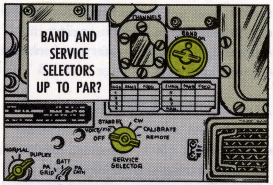
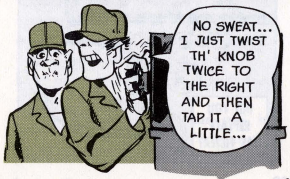






The T-195 may keep right on doin' you a job — but maybe it'd do a better job if the BAND SELECTOR control and SERVICE SELECTOR switch were replaced.

Whoa, now! Don't get it wrong . . . That doesn't mean to just go right out and get Support to replace some smooth-workin' pieces of equipment.

But . . . if the BAND SELECTOR is flush with the frequency you want, and you come up with . . . nothing, then you need a new control. Sure, you can probably wiggle it in the frequency by givin' the control a little twist to the left or right. But that kind of frequency selection can't help havin' a ????? quality about it.

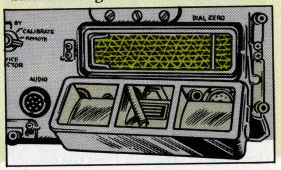
The SERVICE SELECTOR switch can be in trouble because the shaft hole wears down. The set can go on and off without a move on your part.

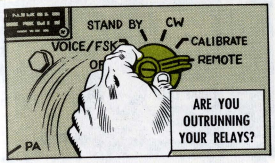
The word is: Replacement. The next word is: Support.

Be sure to give your T-195 the air . . . that is, be sure it gets all the air it needs to stay cool.

That transmitter needs a constant flow of clean air. If it doesn't get it, there'll be some heat trouble ending up in down-time.

Keep an eagle eye upon the dust filter, 'cause that's where it is at. Change filters as often as you need to — and that can be every coupla hours when the dust is rolling.





Cli-i-i-i-ick!

That's one way to swing from, say, OFF to REMOTE or CALIBRATE — but no matter how speedy it seems, you might be outrunning your relays.

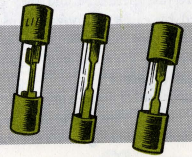
If the switch is pointing at REMOTE, but the relays have you at CW or STANDBY, you're just not where you wanna be.

So, what to do?

Turn that SERVICE SELECTOR switch one click at a time and wait a second at each position, so the relays can kick in and take you to the next position. When the switch and the relays agree, when they're where they oughta be, you're wading in communications clover.

The amperage and diameter of the dynamotor fuses are stamped on the metal ends of the fuses. For the right fuse, use these, as listed on page 5, TM 11-5820-335-20P (Jul 65).

FSN 5920-057-2985	F602	10-amp	4AG
FSN 5920-565-0035	F603	30-amp	4AG
FSN 5920-012-0151	F601	15-amp	3AG



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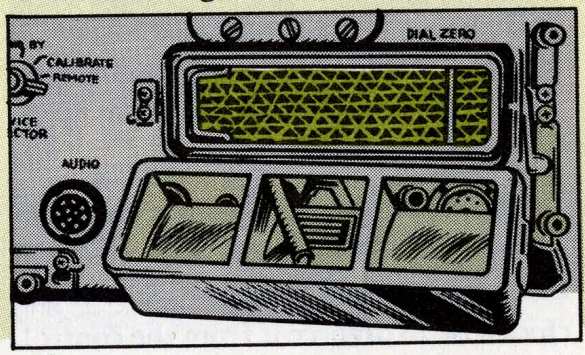

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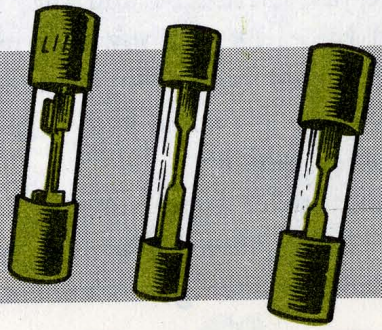


PS MORE

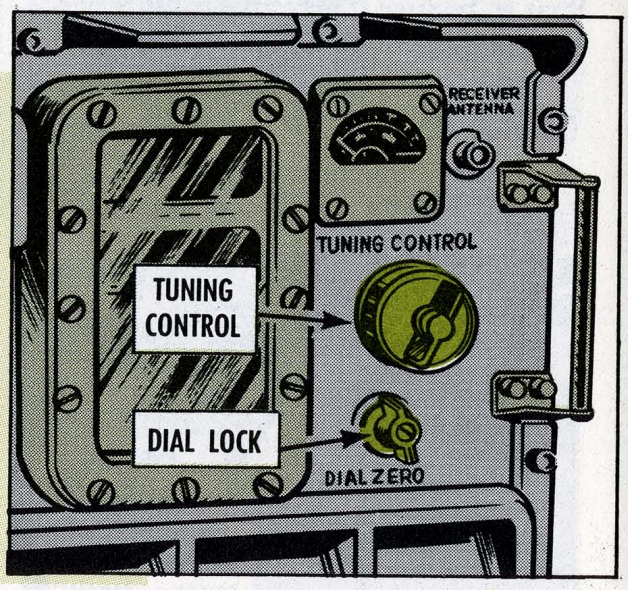
If your T-195 gets stubborn when you shift frequency from manual up to Channel 7 . . . it could need a trip to support. But, in the meantime:

Shift the CHANNEL SELECTOR back to a lower channel . . . 3 or 4, maybe . . . and let it complete its cycle there. Then make the shift on up to Channel 7.

Don't put the pressure on the kilocycle TUNING CONTROL without first turning the DIAL LOCK counterclockwise to divorce it from the control.

Otherwise, you can foul up your control and lose your transmitter to support for a repair job.

So-o-o-o, first-off, release the DIAL LOCK, then set the TUNING CONTROL, and follow with the counterclockwise turn of the DIAL LOCK to lock your setting.

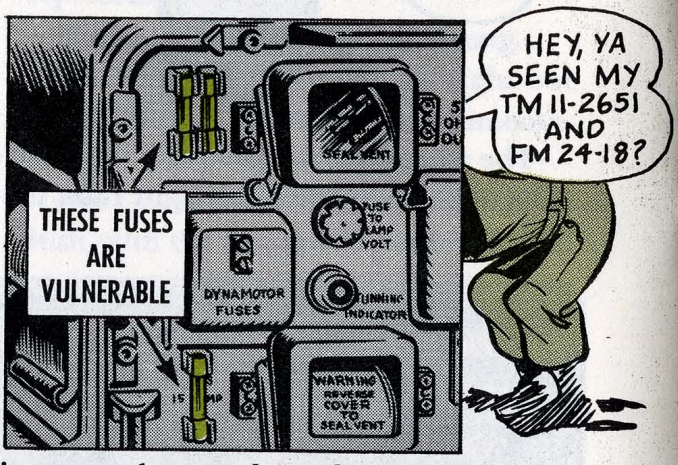


Better measure those antenna wires correctly on your center-fed Hertz doublet, else you'll have a popped PA tube in your transmitter. As little as a 3-in difference in the 2 antenna wire lengths can cause additional plate current and blast the power amplifier tube (V201).

A tape measure is handy to make sure you've got those wires matched in length. If there's any difference between the 2 lengths, keep it under 3 inches.

If you crave to brush up on doublet antennas, the info's in TM 11-2651 and FM 24-18.

Exposed and vulnerable. Those words surely do apply to the spare fuses reposing in the left front of your T-195. These fuses lack protection . . . they're just there . . . and they can be busted by careless elbows, arms, feet, or what-have you. Be kind to 'em. Y-may need 'em when you've got a hot emergency movin'.



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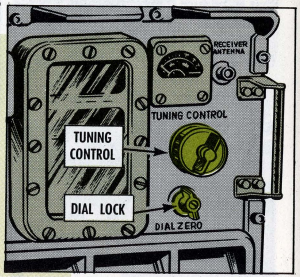

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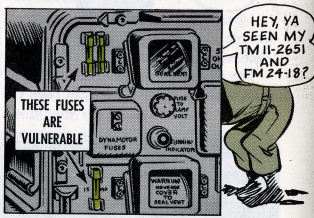

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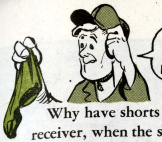
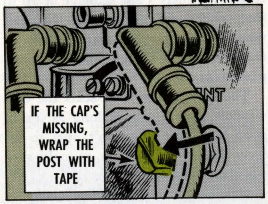


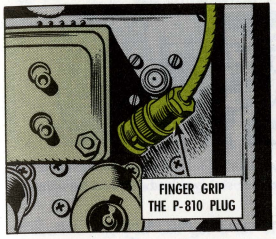
R-392 RECEIVER

Why have shorts in the R-392/URR receiver, when the shorting trouble can be blocked?

The plug connector on the RF cable (CG-1127/U) sometimes turns sideways and bops into the binding post. Thus, you're shorted.

Wrap a strip of electrical insulating tape around the binding post, to stop the shorts.





When you disconnect the P-810 plug from its J-510 jack on the R-392 receiver, you'll be better off not to make the disconnection by pulling on the wiring. That piece of wiring can break just over the plug if it's given the iron-hand treatment.

If you finger-grip the plug itself without bringing the wiring into the action, you should come up with a smooth disconnect — and no snapped wiring.

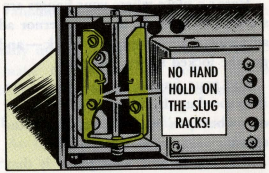
When the R-392 is out of its case, and you're turning it around, beware of getting a hand-hold in the slug racks.

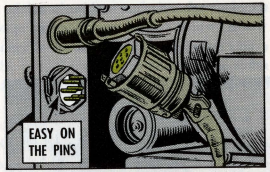
These can pull out, and you can fall heir to broken iron-core slugs or damaged springs on top of the slugs.

The P-109 plug jammed haphazardly into the J-809 jack can break or bend the brittle jack pins.

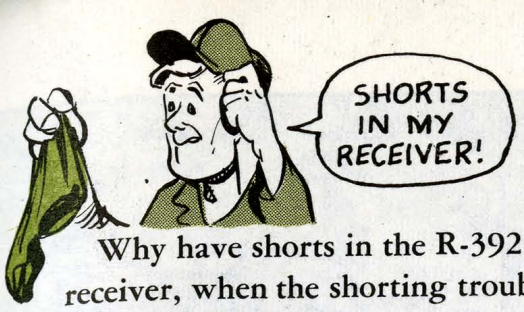
But if you do spot some bent pins, back off. Don't try to straighten 'em . . . they're almost a cinch to break. Let support take on the straightening job.

The pins on that J-809 jack can also be goofed up by careless removal of the V-801 tube, so it'll pay dividends to easy-hand the tube removal.





MORE



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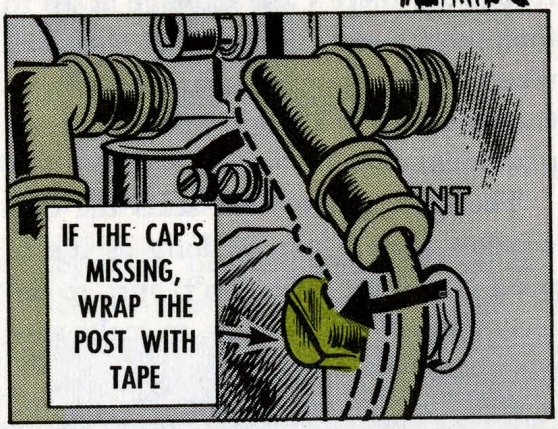

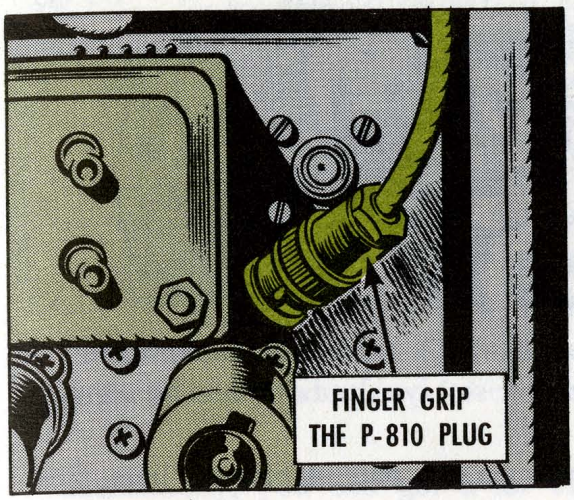

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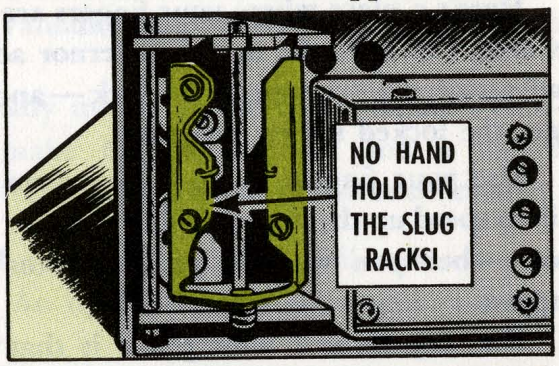
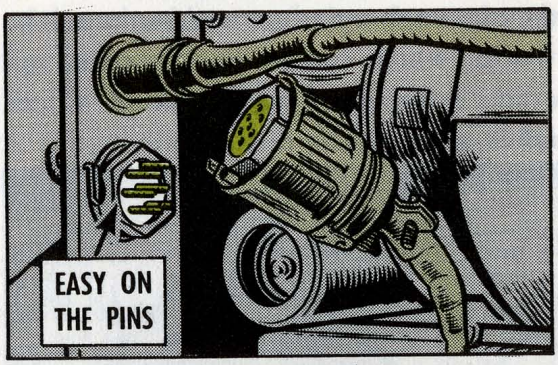
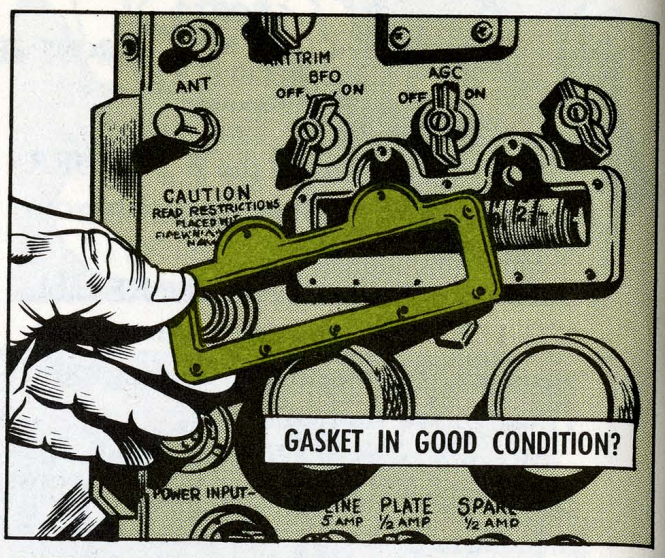




P.S MORE

You'll want to inspect the waterproof seal that stretches around the R-392. Reason: if there's any damage at all to that rubber seal, the receiver will leak water. If you spot any tears, breaks, or frayed areas, it's high time for a replacement seal.

The cork gasket that seals the dial window does a job, as long as it's in good condition. Wouldn't hurt to inspect this now and again, to make sure you don't need a new one.



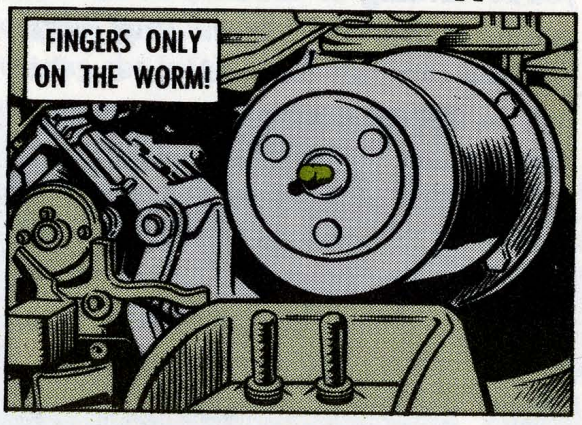
TT-76( )/GGC, AN/UGC-4 TELETYPEWRITER SETS

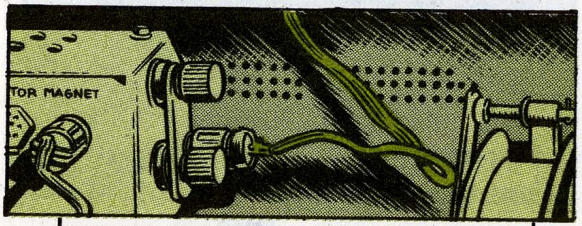
If you're operatin' a non-synchronous TT-76( ) reperforator-transmitter or a TT-98B (of the AN/UGC-4 teletypewriter set), you're bound to be adjustin' the motor speed now and then.

Here's a place where your fingers are better'n any pair of pliers. Pliers, f'rinstance, can burr the motor governor adjustment worm, maybe even cause the adjustment worm spring to lock—and then comes the quick-step to support to get the locked spring unlocked.

Use your fingers to push the worm in to speed up the motor. Pull the worm out when you want to reduce motor speed.

One big trouble with pliers is that they leave sharp edges and burrs on the worm, which cut an unsuspecting operator's fingers. And that kind of cut takes a long time to heal.





It's good to remember . . . when you're removin' the dust cover, the first thing you do is remove the P12 copy-light plug from the J12 connector of the power supply and terminal unit.

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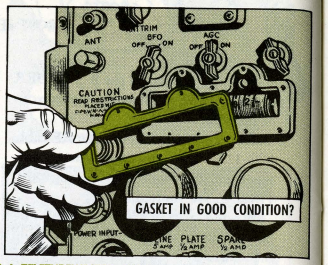

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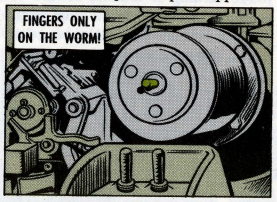
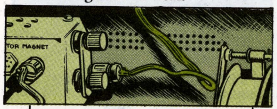




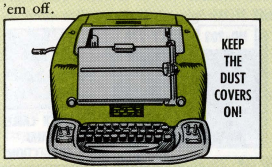
It's good to remember . . . when you're removin' the dust cover, the first thing you do is remove the P12 copy-light plug from the J12 connector of the power supply and terminal unit.

Then you simply lift the dust cover straight up off its mounting grommets.

If you forget to unhook the copy-light plug from its connector, before you lift . . . you could come up with a damaged plug or connector. For reminder, get some 1-in-wide pressure-sensitive tape and letter it:

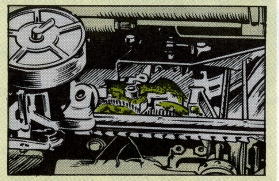
You can ask for a 60-yd roll with FSN 8135-530-5514.

Keep those dust covers on your teletypewriters as much as possible. Dust and dirt are ferocious foes, and the dust cover stands guard over the TT to stave 'em off.



This is especially important if your vehicle is travelling and kickin' up the dust.

Speakin' of dust, too much oil on a teletypewriter can draw dust and dirt



like a magnet. And dirt grindin' around in those TT gears doesn't make for long-term communication.

So-o-o-o, lube 'er lightly.

Incidentally, you can get a lot of valuable teletypewriter lube info from **TB 11-5800-204-20/1 (Feb 66).**

Y'know, when a fuse blows, it usually means you're in a little more trouble than just replacin' a fuse. If you make the replacement and it blows again, it's time for higher-echelon help. No use blowin' that third fuse unnecessarily.

When you install a new ribbon spool, see that the indented side is down, so that the ribbon will feed off the spool. An upside-down ribbon spool installation can cause ribbon drag on the roller.

There are Joes who like to turn knobs and such, sometimes just because the knobs're sticking out and available on some control panel.

When it comes to your TT, the best thing is to leave the knobs be, unless you're makin' adjustments on motor speed or the rangefinder. The wrong turn of the wrong knob at the wrong time could leave you holdin' the short end of the stick—meanin' a loused-up TT.

'Nother thing, when you shove back the TT-76 or TT-98B teletypewriter shelf, avoid pinching or scraping the cables. Grab a handful of the cabling and lift up . . . hang onto it until the shelf lock has clicked in.

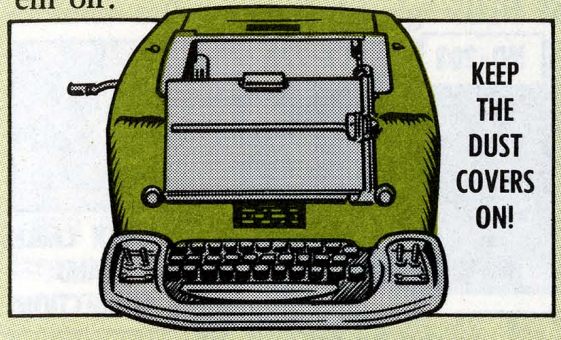
Then you simply lift the dust cover straight up off its mounting grommets.

If you forget to unhook the copy-light plug from its connector, before you lift . . . you could come up with a damaged plug or connector. For reminder, get some 1-in-wide pressure-sensitive tape and letter it:

CAUTION, UNHOOK COPY-LIGHT PLUG TO REMOVE COVER.

You can ask for a 60-yd roll with FSN 8135-530-5514.

Keep those dust covers on your teletypewriters as much as possible. Dust and dirt are ferocious foes, and the dust cover stands guard over the TT to stave 'em off.



This is especially important if your vehicle is travelling and kickin' up the dust.

Speakin' of dust, too much oil on a teletypewriter can draw dust and dirt

like a magnet. And dirt grindin' around in those TT gears doesn't make for long-term communication.

So-o-o-o, lube 'er lightly.

Incidentally, you can get a lot of valuable teletypewriter lube info from **TB 11-5800-204-20/1 (Feb 66).**

Y'know, when a fuse blows, it usually means you're in a little more trouble than just replacin' a fuse. If you make the replacement and it blows again, it's time for higher-echelon help. No use blowin' that third fuse unnecessarily.

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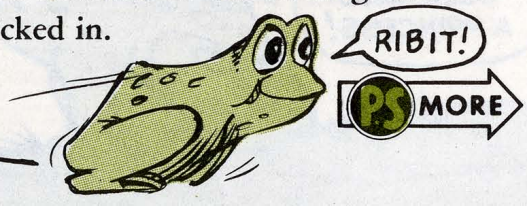
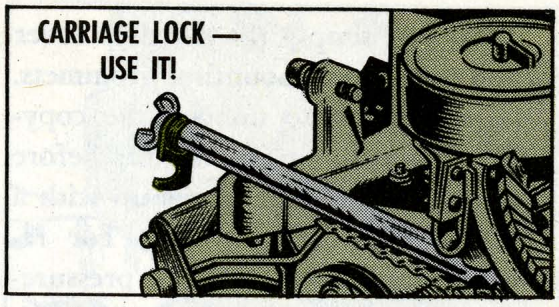


When you're busy packin', movin', unpackin', you can forget mighty easily to lock in the platen and carriage and blocking plates on the TT-98B.

The discrepancy in that line of action could show up sadly at the end of the ride.



Remember, your Direct Support positions the blocking plate. The plate blocks the carriage-return driving gear when it's positioned for moving.

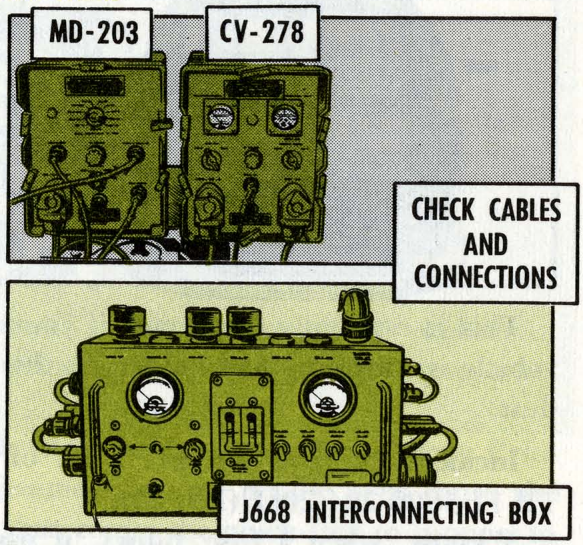
If it's a short move, it's OK to secure just the carriage lock. But for longer trips, or for packing, both the plate and carriage lock need to be in place. The platen is locked whatever the move.

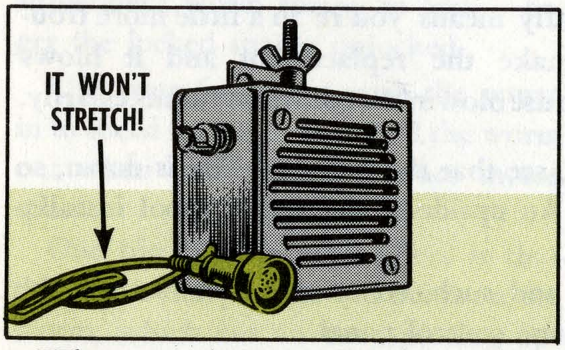
SOME OTHER ITEMS

You've got the MD-203/GR modulator and the CV-278/GR frequency shift converter to consider with PM points on your eyeballs.

Look for cracked, frayed and loose connections and cables, tangled and broken external wiring, wrong fuses.

The J-668/GR interconnecting box should come in for a check-out to keep 'er operational. Look for loose knobs, mangled receptacles, damaged connectors, and the like.

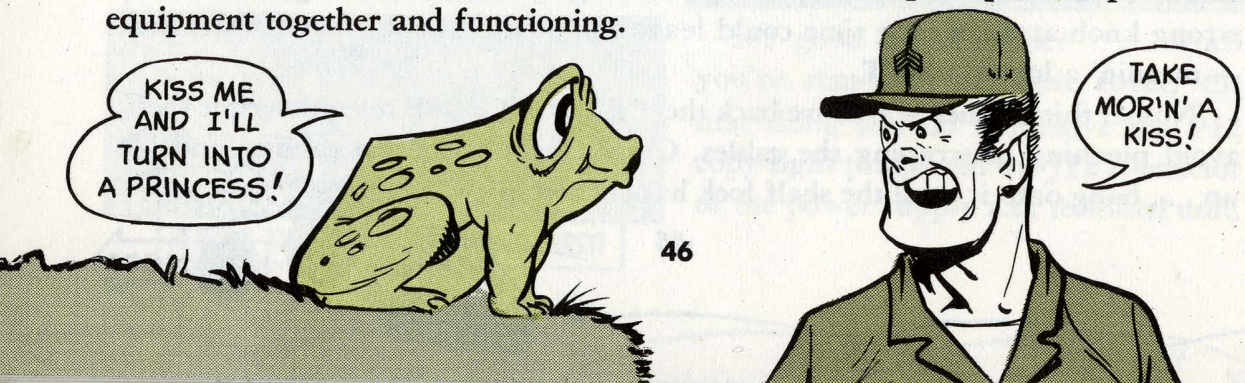




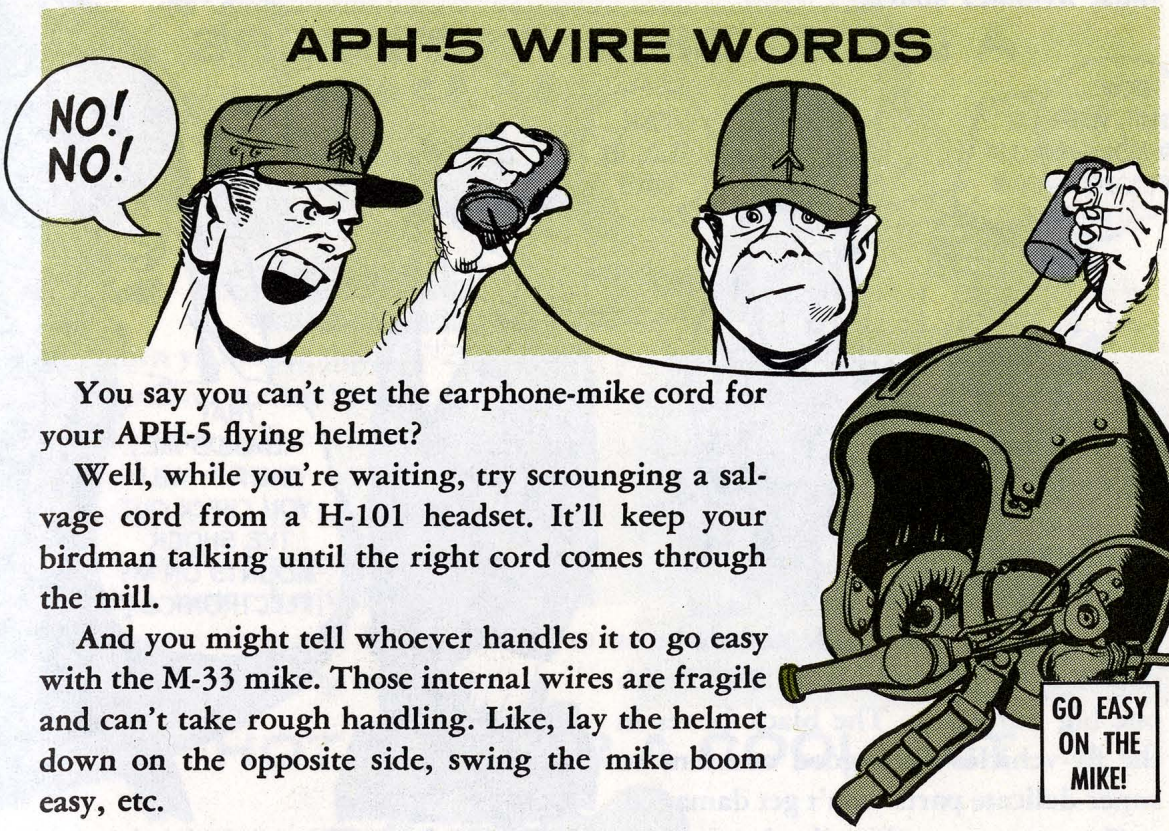
The electrical cable on the LS-166/U loudspeaker just won't stretch. What you can do if you try to stretch it is pull the wiring off the posts inside the speaker, after the cable slips through its strain-relief housing.

Then, o'course, it's support a la down-time.

When you change positions, you'll be better off if you keep one hand under the LS-166 and the other hand on the cable. This will help keep the 2 pieces of equipment together and functioning.



APH-5 WIRE WORDS



You say you can't get the earphone-mike cord for your APH-5 flying helmet?

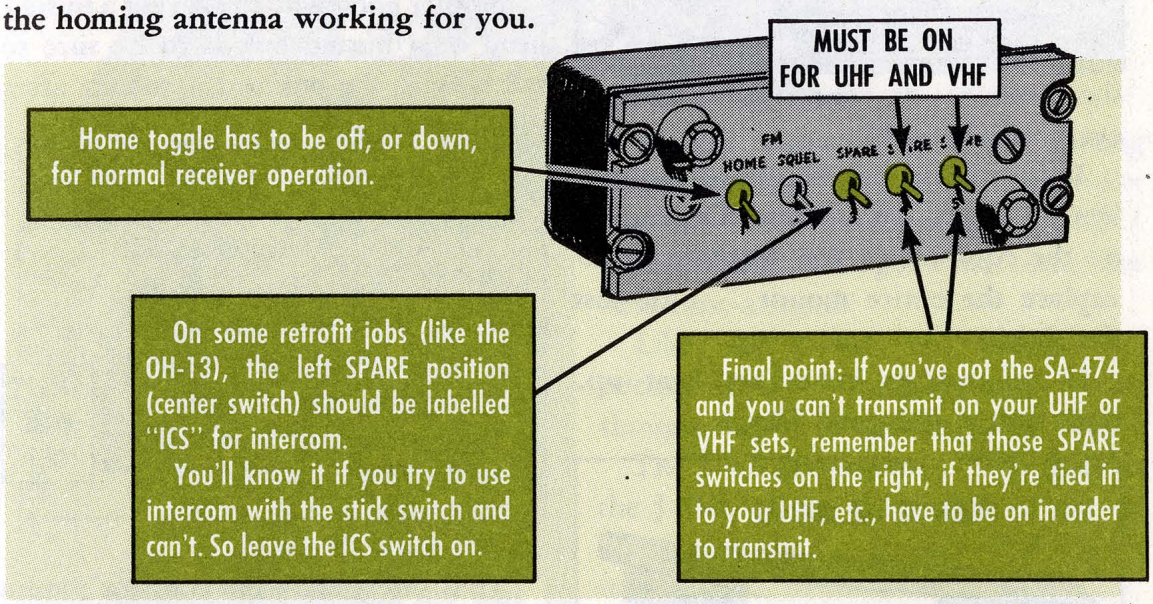
Well, while you're waiting, try scrounging a salvage cord from a H-101 headset. It'll keep your birdman talking until the right cord comes through the mill.

And you might tell whoever handles it to go easy with the M-33 mike. Those internal wires are fragile and can't take rough handling. Like, lay the helmet down on the opposite side, swing the mike boom easy, etc.

ARC-44 SWITCH FLIP

Bugged by no receiver action on your AN/ARC-44 radio set?

Before you write it up, better check the switch position of the HOME toggle on the SA-474 or similar homing switch assembly. If it's on or up, you've got the homing antenna working for you.



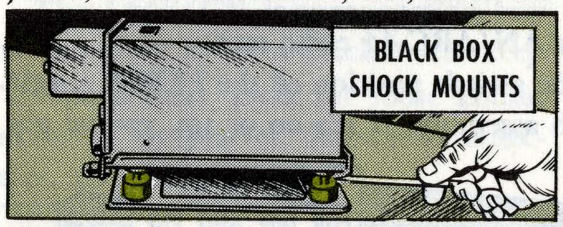
In other words, be sure the switch you want or need is flipped . . . before you write it up.

THOSE AVIONICS BOXES...

A L'IL CUSHIONING HELPS

Aircraft bounce, joggle and shake as naturally as a ground vehicle . . . with one big difference. The black boxes in the fly-vehicles need good cushions so super-delicate parts won't get damaged.

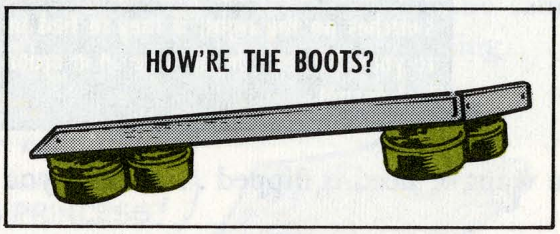
To protect against broken solder joints, loose connections, etc., check the



shock mounts on your avionics at least every 100-hour PE.

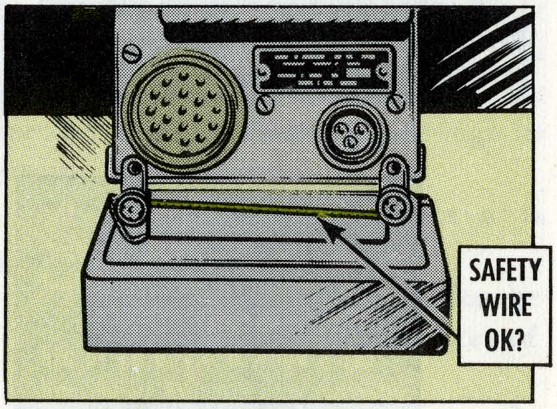
If the shocks are bottomed, replace 'em . . . or get 'em replaced. Depending on the equipment, you might have to replace the entire mount . . . or just the shock.

If the rubber boots are beat up, replacement is a good idea.



Beat-up boots just might be the clue that the shock is ready to tear loose from the mount, sending little black boxes through a rider's head. Which is good reason to make sure the mount's secure.

'Nother good way to prevent a busted head or a busted box is to be sure to safety-wire the box to the mount after

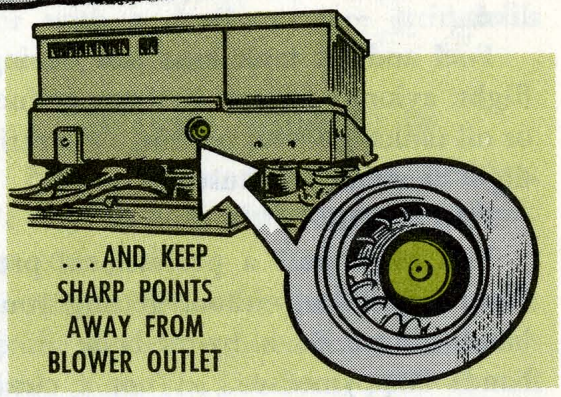


you clamp it in place.

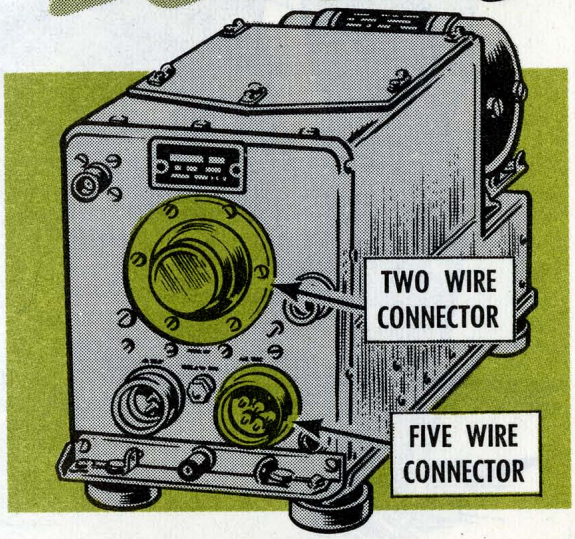
That safety wire bit goes for mount locks, dynamotor locks . . . and wherever else it's needed.

When ya handle that RT-246 or RT-524 receiver-transmitter, be careful not to flop the R-T over on its rear end where the blower outlet is. This can bend or crack the back panel, or even botch up the blower.

Also, better keep sharp points and edges away from the blower outlet to keep from damaging the fan.



HOT TIP FOR A COOL SET



If you wanna keep from getting burned up about the whole thing, make sure the R-508 receiver on your AN/ARC-60 radio set'll get a cool connector next time around.

Like, the 2-wire and 5-wire connectors are not for mixing up . . . even though they're interchangeable.

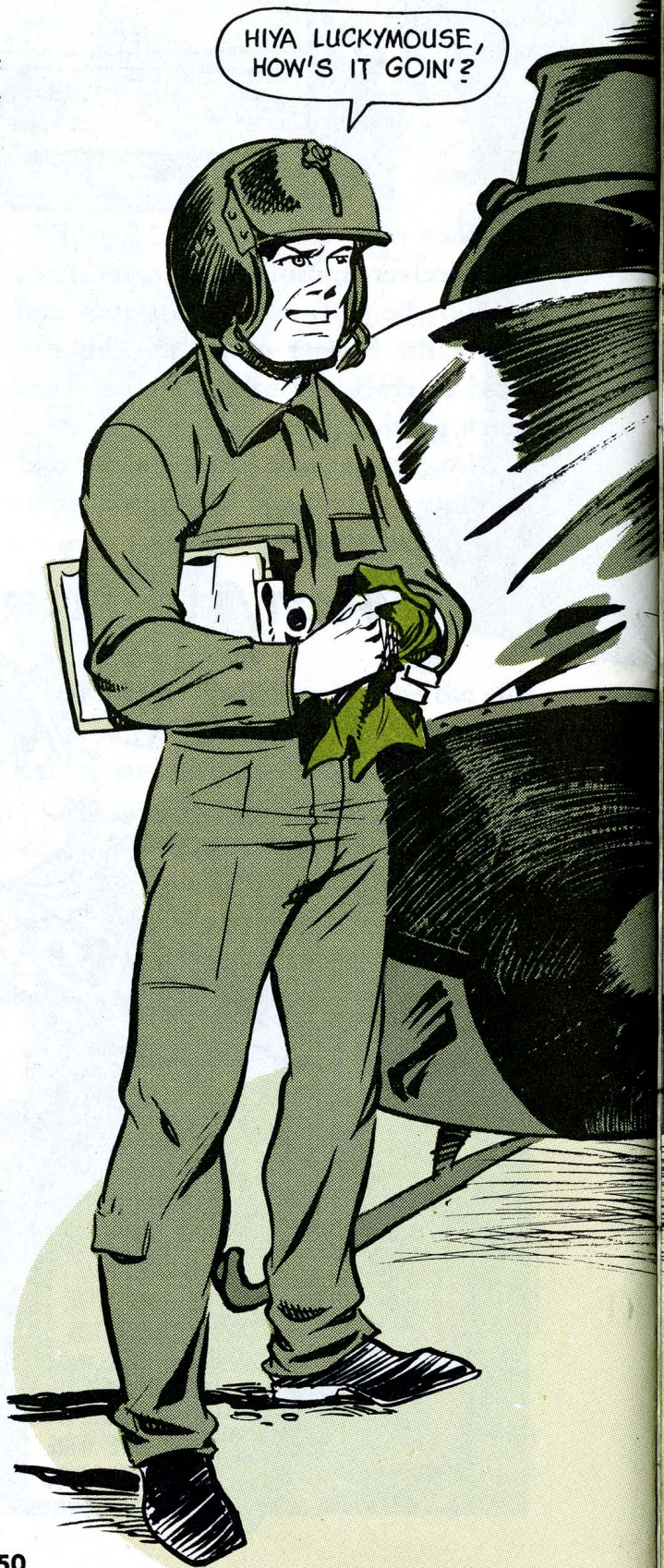
The 2-wire connector (P303) goes to the J-303, or top center jack of the receiver, and the 5-wire job (P302) goes to the J-302, or lower right jack.

Mixing 'em up can burn out the circuitry in the set.

AIR MOBILITY

PILOT CHECKLIST INSPECTION . . .

HAPPYMOUSE



Some Armymouses just won't believe the war stories told about ding-a-ling pilots who goof off on a preflight walk-around inspection, resulting in things like:

Fuel and oil tank caps lost during flight; avionics failure; half-empty fuel or oil tanks ignored; binding or erratic flight controls; ad nauseum.

FIGHT DIRTY.

You can't pull a professional pre-flight inspection without getting your hands dirty. Be a by-the-book dirty hands Happymouse . . . not a clean hands Luckymouse.

Here's the difference. A Luckymouse looks at the Pilot's Checklist item, TAIL ROTOR GEARBOX, Check. He looks at it . . . it looks OK . . . so he thinks he's checked it. He didn't dirty his manicure. If something is amiss and he survives the next flight, he's a Luckymouse.

By-the-book Happymouse checks the condition of the tail rotor gearbox for unusual leakage or seepage. He checks the oil level; chip detector wiring and plug for security and broken wires; makes sure the oil filter cap is tight fitting; and that the chain is secured to cap and filler neck. A real dirty hands job . . . but he knows nothing is amiss.

PILOT CHECKLIST INSPECTION . . .

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Here's a walk-around deal for the OH-58A (Kiowa). If it differs in details from the one for your bird, no sweat. The main thing is HOW thoroughly you check each item.

Leaving inspections strictly for the crewchief, or pulling them by memory or with a devil-may-care attitude is out . . . way out!

OUTSIDE LOOKING IN

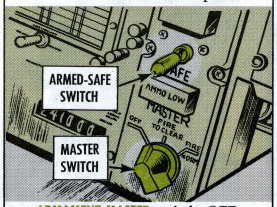
Natch, you start with the checklist. It stays in your bird, not stashed back in your pad.

PUBLICATIONS—Eye the log book forms to see that all required maintenance has been done. The DA Form 2408-13 will clue you on the bird status, the 2408-14 on uncorrected faults and the 2408-18 on additional inspections due.

How 'bout DD Form 365F? You'd be surprised how many Luckymouses get by—once, maybe—with overloading their birds, or offset the CG limits or fail to compute density altitude at destination. Some 'Mouses ain't so lucky!

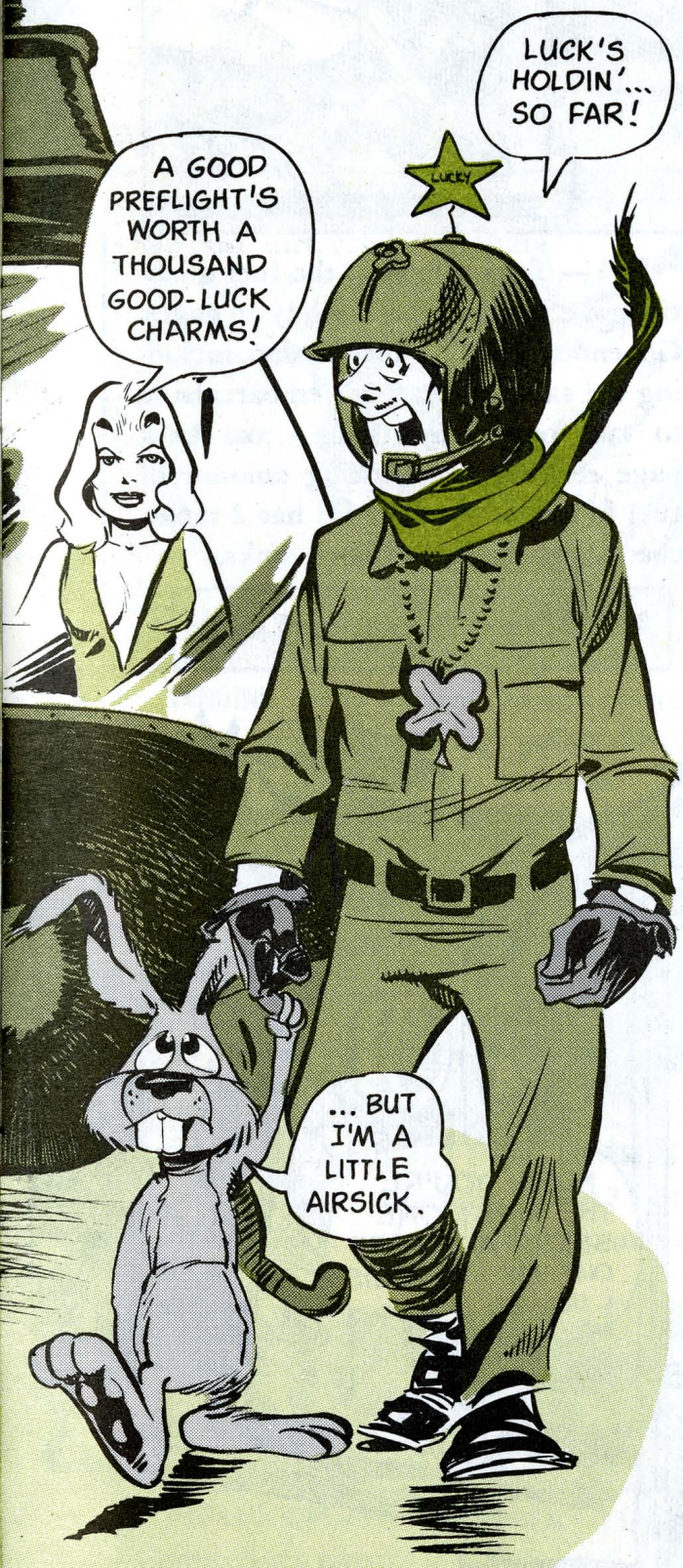
Any local SOP's to eyeball before takeoff?

ARMED-SAFE switch. In SAFE position.



ARMAMENT MASTER switch. OFF.

OR LUCKYMOUSE



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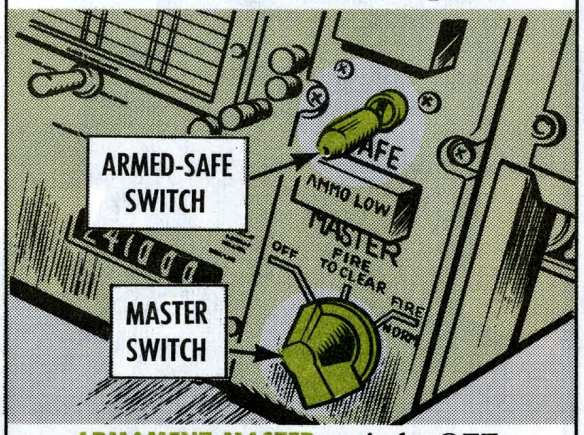
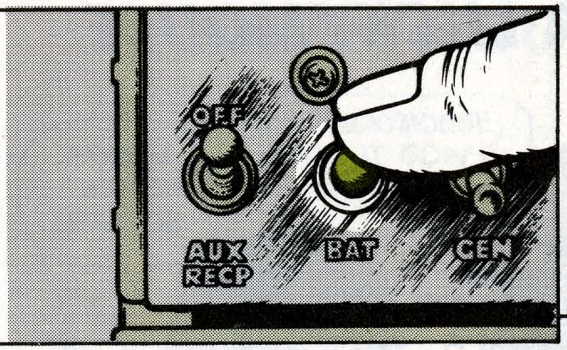


ARMAMENT MASTER switch. OFF.

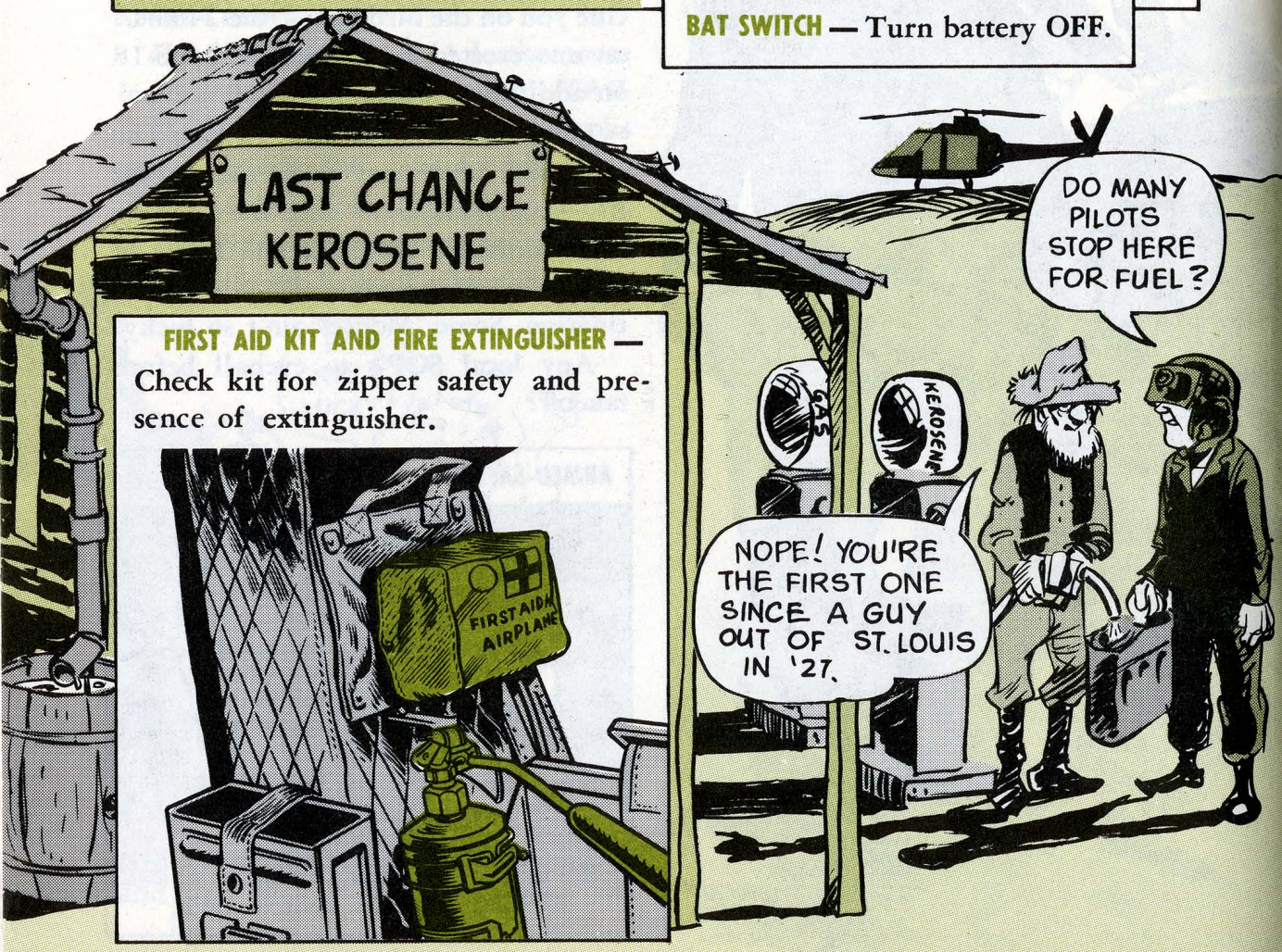
P.S MORE

BAT SWITCH — Turn it ON to check landing lights and POSITION lights. Put NON-ESSential BUS switch in MANual position. If you're in SEA Operations be sure lights are operating. A mission could take you in and out of scuddy weather, or into semi-darkness.

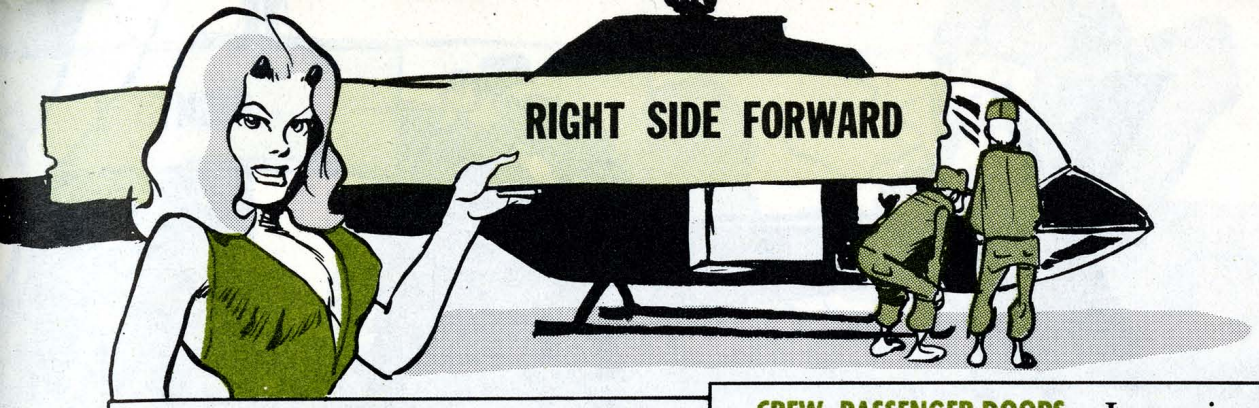


FUEL — Take a look at the fuel quantity gage. Never depend solely on gages. Got enough fuel for the mission, including the safety factor? It's embarrassing to run out — any time. Cross-check gage reading by checking amount of fuel in tanks. If your bird has 2 tanks, check **both** gages and **both** tanks.

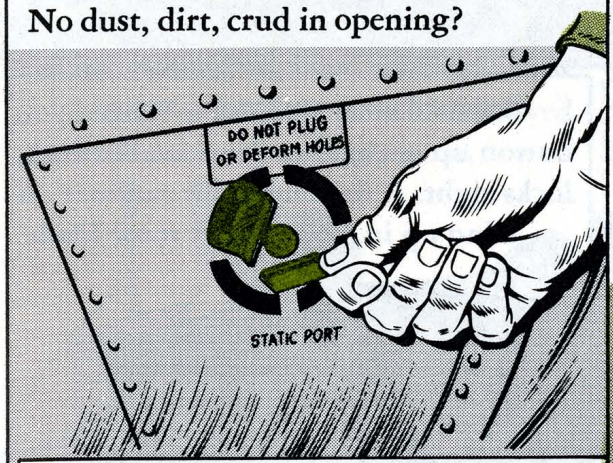
BAT SWITCH — Turn battery OFF.



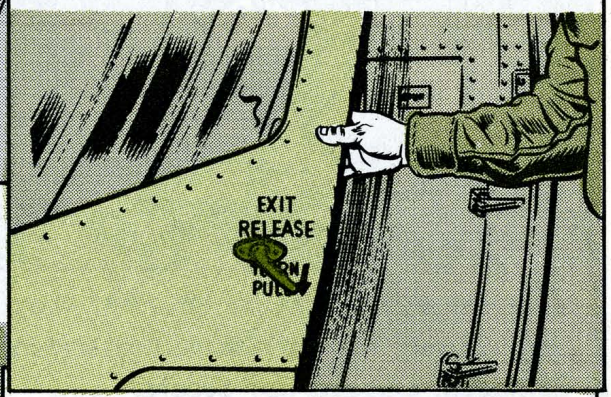
FIRST AID KIT AND FIRE EXTINGUISHER — Check kit for zipper safety and presence of extinguisher.



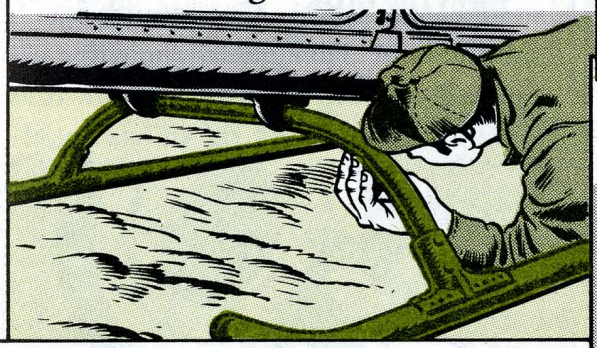
STATIC PORTS — Clean, unobstructed? No dust, dirt, crud in opening?



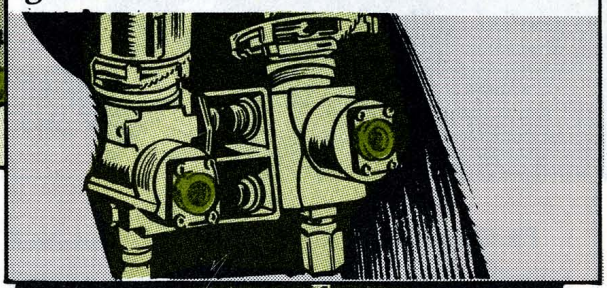
CREW, PASSENGER DOORS — Loose rivets? Dents? Will they close and lock tightly? Emergency jettison handles safetied? Check safety belts and shoulder harnesses if doors are removed for mission. If no one's riding up front with you, fasten seat belts, harness so they won't interfere with co-pilot flight controls.



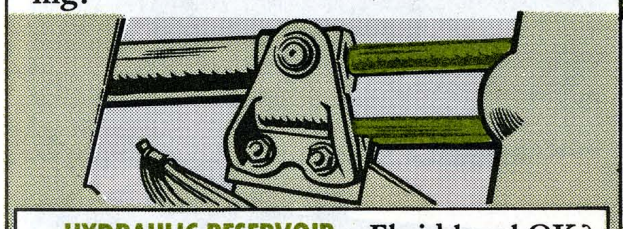
LANDING GEAR — Any loose rivets, dented skids? Attaching points OK? Ground handling wheels removed?

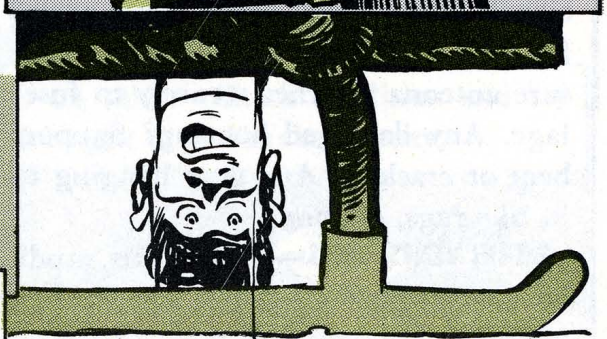


HYDRAULIC FILTERS — Those buttons gotta be down.



HYDRAULIC SERVOS AND FLIGHT CONTROLS — Any leaks at attaching points? All controls secure and safetied. Free moving?

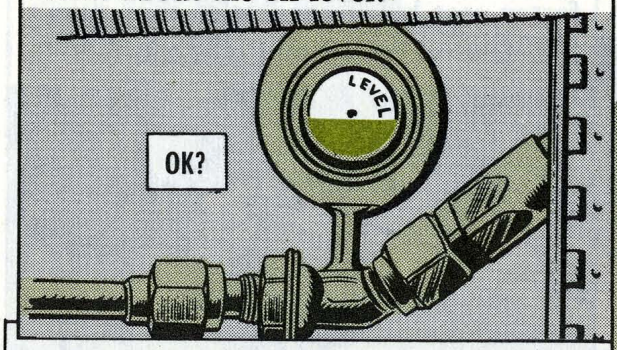




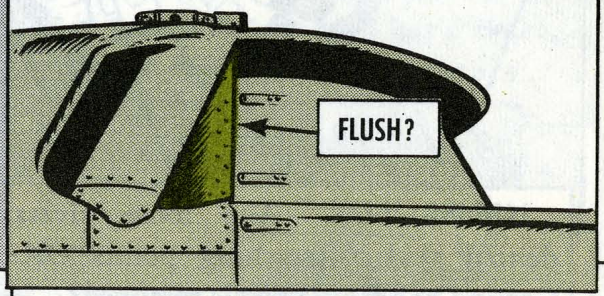
HYDRAULIC RESERVOIR—Fluid level OK? Connections tight?

P.S. MORE

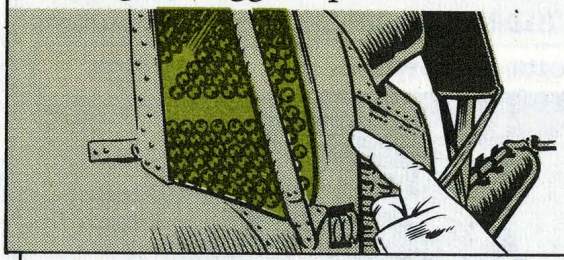
TRANSMISSION — Is it in A-1 condition? Any dents, cracks, loose bolts, nuts? How about the oil level?



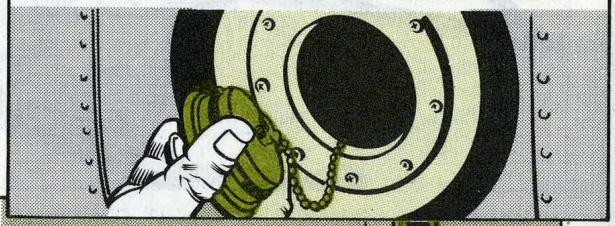
TRANSMISSION COWLING — When you button up make sure the door fits flush, locks tight. A flapping door can tear off . . . wind up in main or tail rotor blade.



ENGINE INLET — Cover removed? Any dirt, grime, obstruction? Inlet screen damaged, clogged up? Secure?

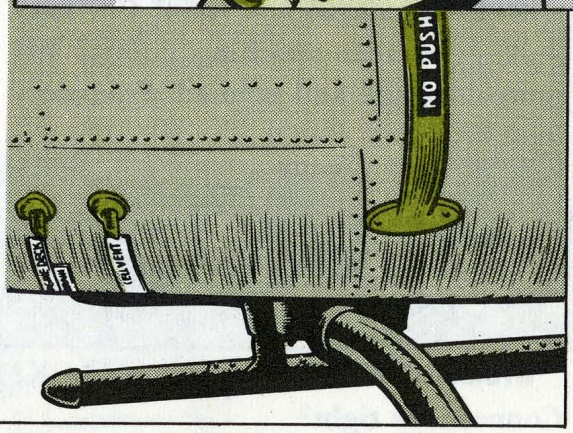


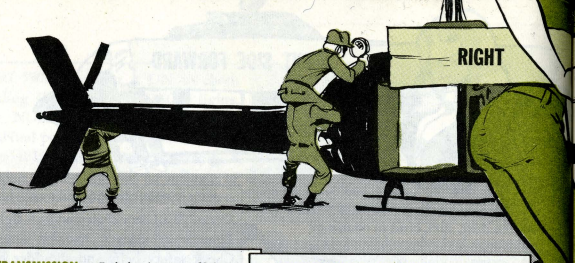
FUEL TANK FILLER — Got enough fuel for the mission? How 'bout the filler cap? Fit tight? Check the safety chain. It can — and does — break off inside neck!



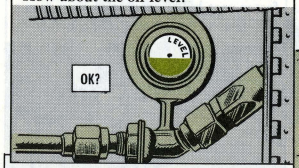
FM HOMING ANTENNA — Observe the NO STEP, NO PUSH signs. Has anyone been using antenna for support? Make sure antenna attaches securely to fuselage. Any damaged housing? Support bent or cracked? Any gear hanging to it, like rags, clothing?

DRAIN VENTS, LINES — Free of dirt, mud? Undamaged?

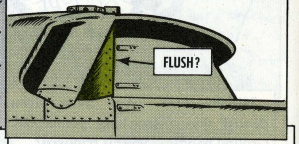




TRANSMISSION — Is it in A-1 condition? Any dents, cracks, loose bolts, nuts? How about the oil level?

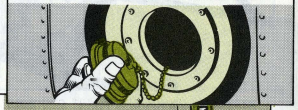


TRANSMISSION COWLING —When you button up make sure the door fits flush, locks tight. A flapping door can tear off . . . wind up in main or tail rotor blade.



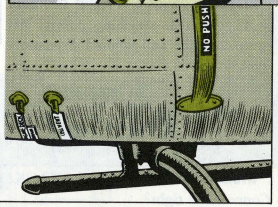
ENGINE INLET — Cover removed? Any dirt, grime, obstruction? Inlet screen damaged, clogged up? Secure?

FUEL TANK FILLER — Got enough fuel for the mission? How 'bout the filler cap? Fit tight? Check the safety chain. It can —and does— break off inside neck!



FM HOMING ANTENNA—Observe the NO STEP, NO PUSH signs. Has anyone been using antenna for support? Make sure antenna attaches securely to fuselage. Any damaged housing? Support bent or cracked? Any gear hanging to it, like rags, clothing?

DRAIN VENTS, LINES — Free of dirt, mud? Undamaged?

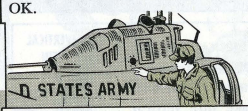


ENGINE EXHAUST — Cover removed. Check for damage, obstructions.

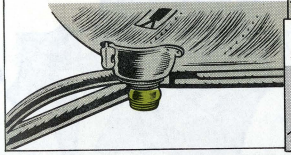
ENGINE COMPARTMENT—Engine secure? Any seepage, drainage? All nuts and bolts safetied? Slippage marks and connections OK? How 'bout cotter keys? Right size . . . in properly? Loose oil lines, loose wires are a no-no. Any chafed lines?

ENGINE AND AFT COWLING — Secured? Fits flush, locks tight?

FUSELAGE—Any damage? Dents, holes, loose rivets? Check the fiberglass aft fuselage beneath structure panel. If it's cracked, look for structural, internal damage—but quick. No cracks? . . . OK.



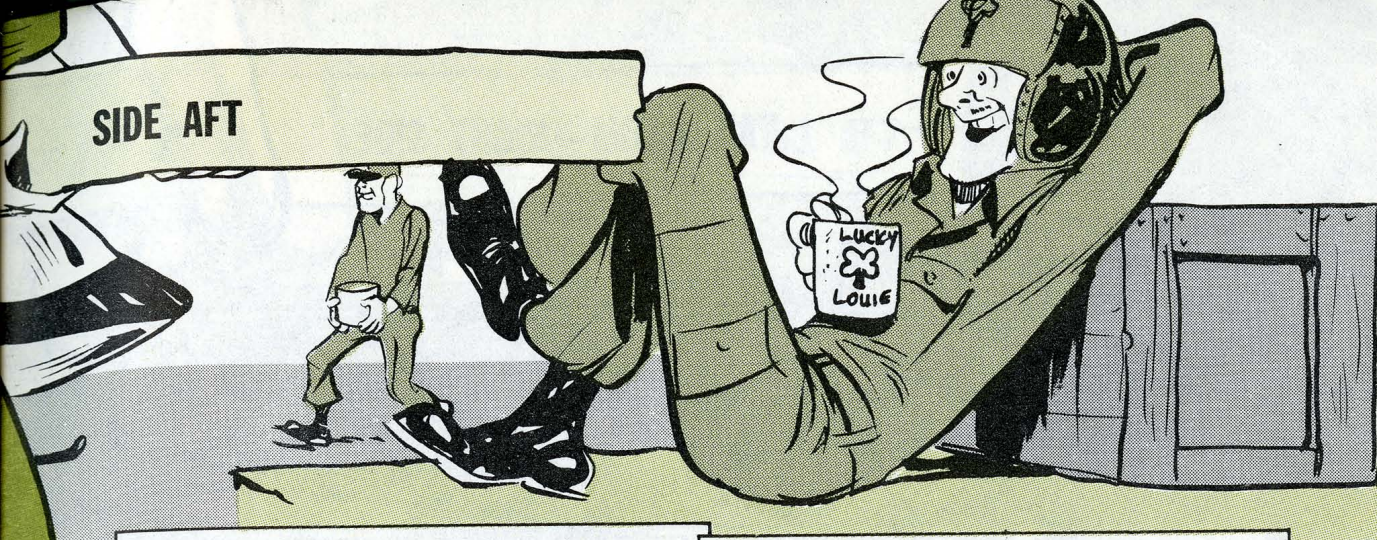
ANTI-COLLISION LIGHTS — Top and bottom. Make sure they're secure. Cover and bulb cracked? Broken?



OIL TANK — Check condition and cap for tight fit and chain security.

PS MORE

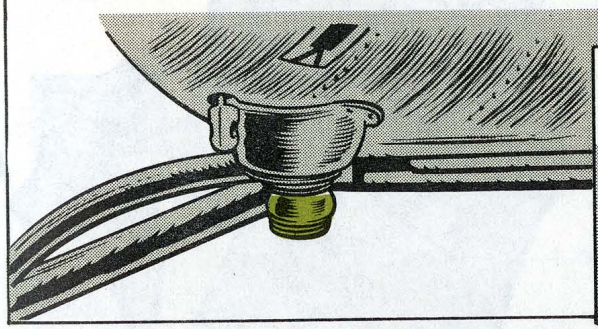
SIDE AFT



ENGINE EXHAUST — Cover removed. Check for damage, obstructions.

ENGINE AND AFT COWLING — Secured? Fits flush, locks tight?

ANTI-COLLISION LIGHTS — Top and bottom. Make sure they're secure. Cover and bulb cracked? Broken?



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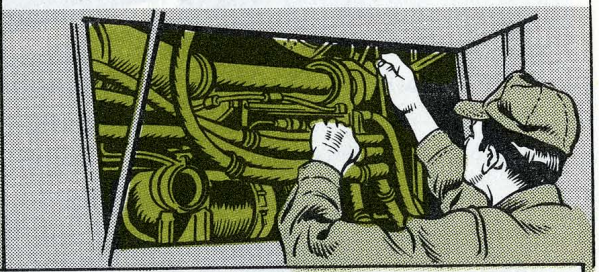

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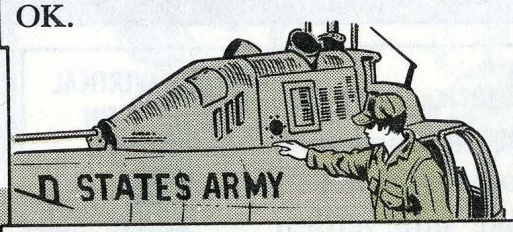
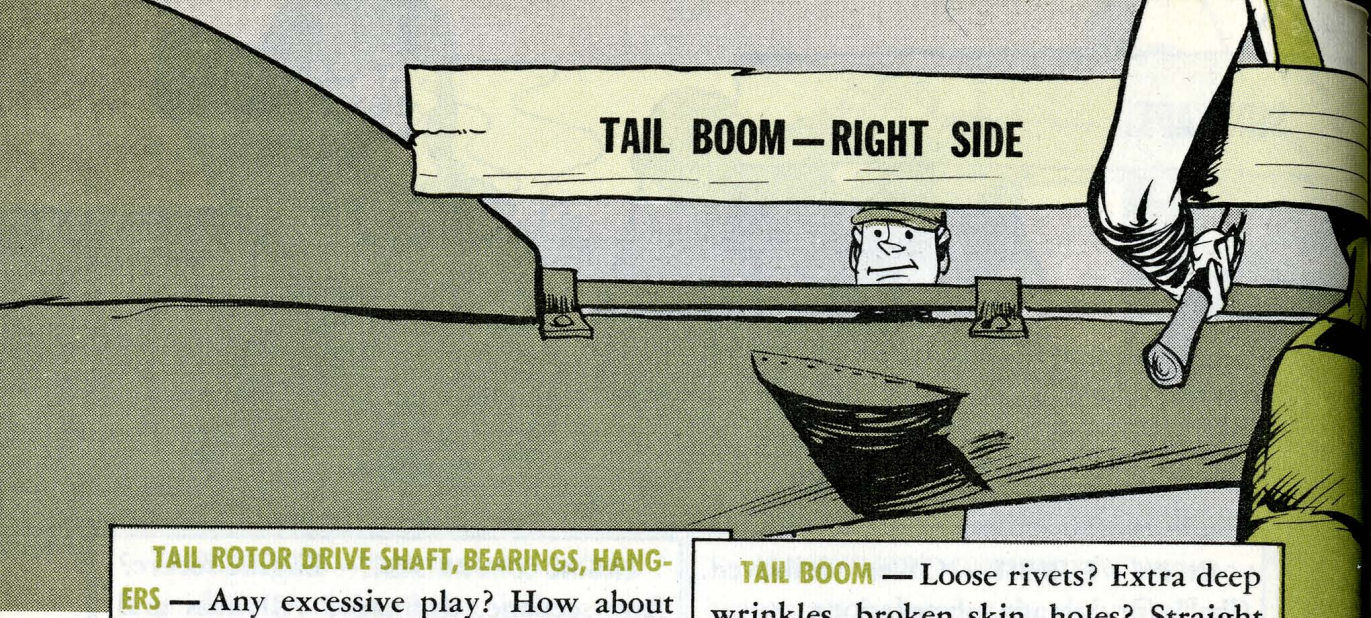
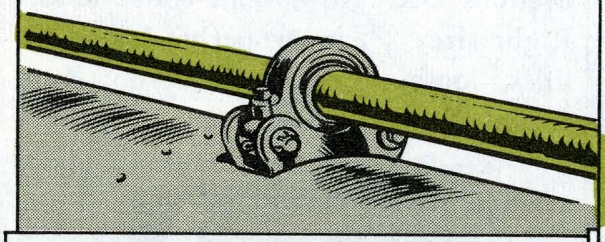


OIL TANK — Check condition and cap for tight fit and chain security.

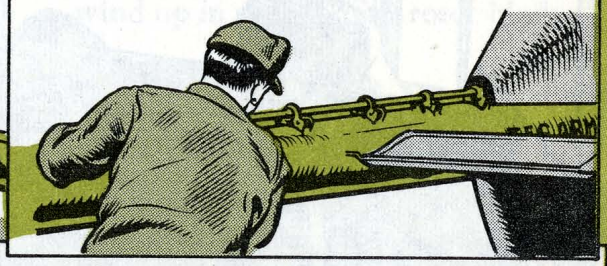
P.S MORE



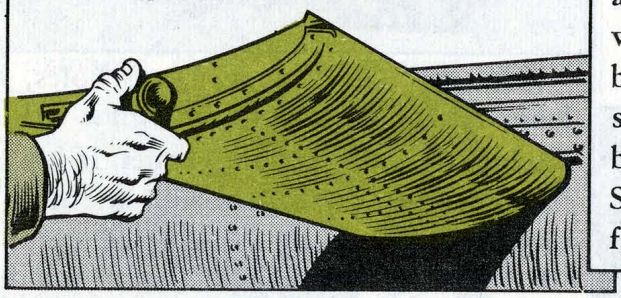
TAIL ROTOR DRIVE SHAFT, BEARINGS, HANGERS — Any excessive play? How about safetied nuts? Shaft bent, damaged?



TAIL BOOM — Loose rivets? Extra deep wrinkles, broken skin, holes? Straight and strong is the byword here.



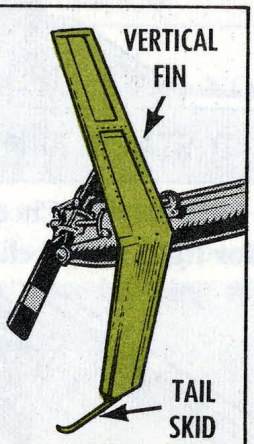
HORIZONTAL STABILIZER — Leading edge OK? No loose rivets. Skin tight. Navigation light in Headmouse condition?



MAIN ROTOR BLADE — Tie-down removed? Hold blade down to eye level and slowly let your peepers move toward blade root. Leading and trailing blade edges should be clean-cut, no obstructions. Pitted, dented, deformed blades get a second look by Support. Same goes for skin wrinkles, bonding failure. Weights OK?

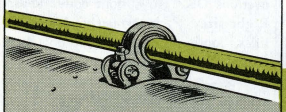
VERTICAL FIN, TAIL SKID — Looseness causes vibrations. Make sure vertical fin is in top shape. No loose rivets, buckled skin allowed.

TAIL SKID — FOD-free and secure?



TAIL BOOM—RIGHT SIDE

TAIL ROTOR DRIVE SHAFT, BEARINGS, HANGERS — Any excessive play? How about safetied nuts? Shaft bent, damaged?



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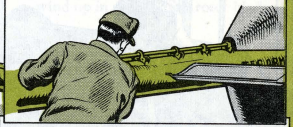
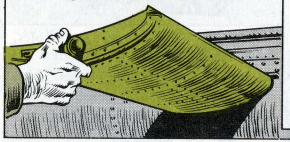


HORIZONTAL STABILIZER — Leading edge OK? No loose rivets. Skin tight. Navigation light in Headmouse condition?



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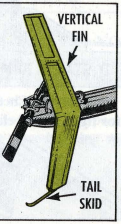
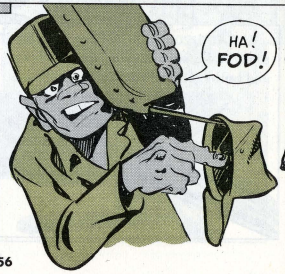
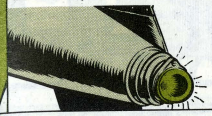


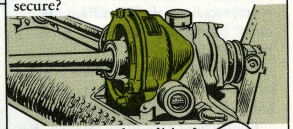


TAIL BOOM—FULL AFT

AFT NAVIGATION LIGHT — Secure, with no broken, cracked bulb or cover.

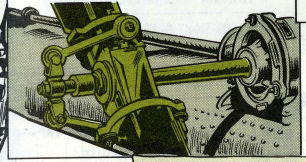


TAIL ROTOR GEAR BOX — Extra seepage anywhere in gear box area warrants double-check, PDQ. All bolts, nuts tight, safetied? Correct oil level? Chip detector plug, wiring secure? Any broken wires that'll give you a false instrument reading? Oil filler cap snug, chain secure?



BOOT — In good condition?

TAIL ROTOR — Blades secure. Any dents in one blade, and both take a trip — DS type. Attaching bolts, nuts, safetied? Free movement in rotor? Any friction/binding and you take a second look. A cracked tip block means a new blade.



TAIL BOOM—LEFT SIDE

TAIL ROTOR DRIVE SHAFT — Same as right side.

HORIZONTAL STABILIZER — Same as right side.

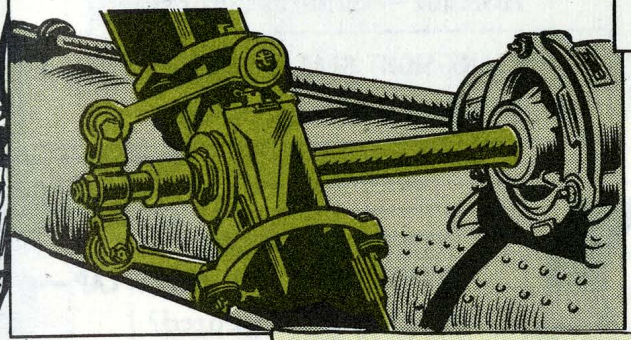
LEFT NAVIGATION LIGHT — Same as right side.

MORE

TAIL BOOM—FULL AFT

AFT NAVIGATION LIGHT — Secure, with no broken, cracked bulb or cover.

TAIL ROTOR — Blades secure. Any dents in one blade, and both take a trip — DS type. Attaching bolts, nuts, safetied? Free movement in rotor? Any friction/binding and you take a second look. A cracked tip block means a new blade.



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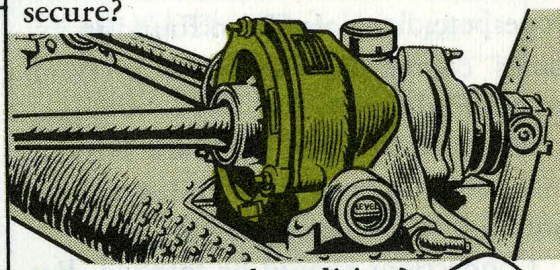


BOOT — In good condition?

TAIL BOOM—LEFT SIDE

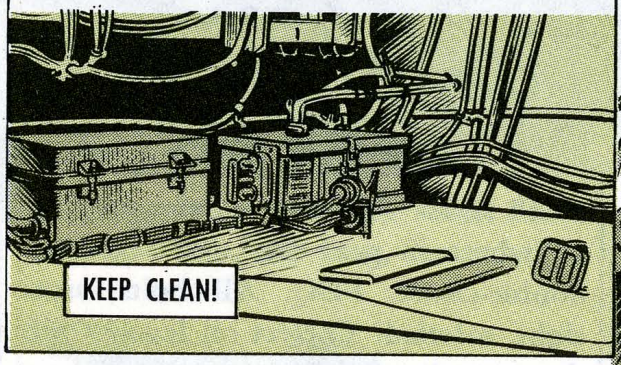
TAIL ROTOR DRIVE SHAFT — Same as right side.

HORIZONTAL STABILIZER — Same as right side.

LEFT NAVIGATION LIGHT — Same as right side.

P.S. MORE

AVIONICS COMPARTMENT — This is not a duffel bag type storage. Clean is the word. Recently a Huey fire was caused by unauthorized stores (a can of hydraulic fluid) shorting out the non-essential bus in lower left side avionics compartment.



Engine oil, transmission oil, smoke grenade rack, oil can with spout, can of GPB grease, MEA vests, rain jacket, ropes, etc. have also been found in avionics compartments. **Keep it clean, man! Fight dirty!**

Put your mitts on the black boxes to make sure all bolts, nuts and screws are holding the avionics gear in place.

Connections should be safetied. Battery connected . . . fuses secure. No bare, broken, or loose wires. Door fits flush and locks?

ENGINE EXHAUST — Remove cover. Any distortion, rips, tears, holes get double-take.

FUSELAGE — Same as right side.

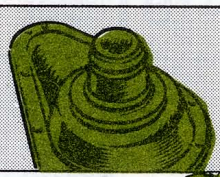
OIL TANK SIGHT GLASS — Check reading against amount of oil in tank.

FUSELAGE —

OIL COOLER RAM AIR HOSE — Secured tight? No holes, rips, tears? Tube free of any obstruction? Exhaust area clear?

TRANSMISSION OIL FILLER CAP — Fits tight; chain secured?

ANTI-COLLISION LIGHT — Same as right side.



SWASHPLATE AND FLIGHT CONTROLS — Cracks, extra movement, loose connections, un-safetied nuts and bolts call for further inspection and investigation.

HYDRAULIC OIL RESERVOIR FILLER CAP — Fits tight; chain secured?

MAST — Secure, straight? Nicks, gouges, cracks are No-No's!

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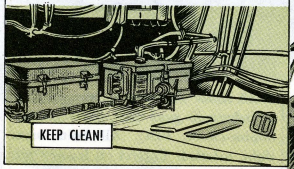

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FUSELAGE —

ENGINE EXHAUST — Remove cover. Any distortion, rips, tears, holes get double-take.

FUSELAGE — Same as right side.

OIL TANK SIGHT GLASS — Check reading against amount of oil in tank.

FUSELAGE — TOP

OIL COOLER RAM AIR HOSE — Secured tight? No holes, rips, tears? Tube free of any obstruction? Exhaust area clear?

TRANSMISSION OIL FILLER CAP — Fits tight; chain secured?

ANTI-COLLISION LIGHT — Same as right side.

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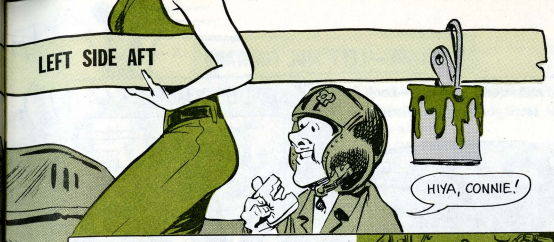
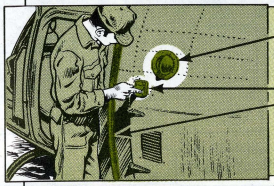
LEFT SIDE AFT



ENGINE COMPARTMENT — Any oil or fuel leaks are suspect. Have crew chief lend a hand and find cause. Engine mounts secure? Connections tight and safetied?

ENGINE AND AFT COWLING — Should fit flush and lock tight, right?



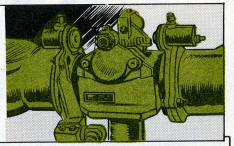
HEATER VENT — Unclogged.

FM HOMING ANTENNA — Same as right side.

TRANSMISSION COWLING — Fits flush, locks tight?

ENGINE INLET — Remove cover. Any gunk clogging inlet?

MAIN ROTOR SYSTEM — Clean and unobstructed? No FOD here! Check oil level of blade grip and pillow block reservoirs. Mast nut and blade retention nuts secure and safetied? Slippage marks unbroken?



MAIN ROTOR BLADES — Must be in Connie Rodd condition. That's No. 1! Weights OK?

MORE

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HEATER VENT — Unclogged.

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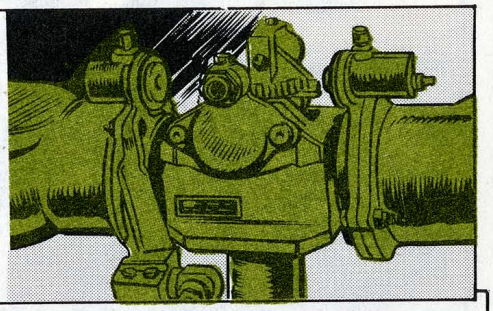
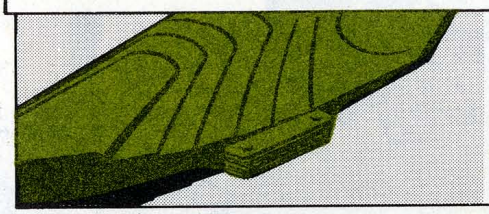


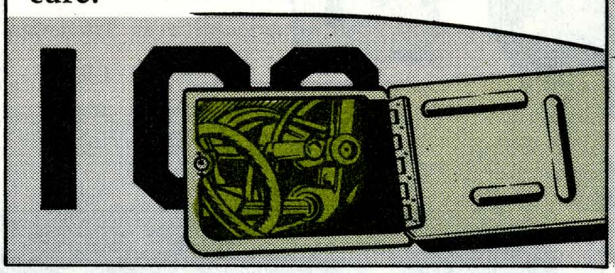


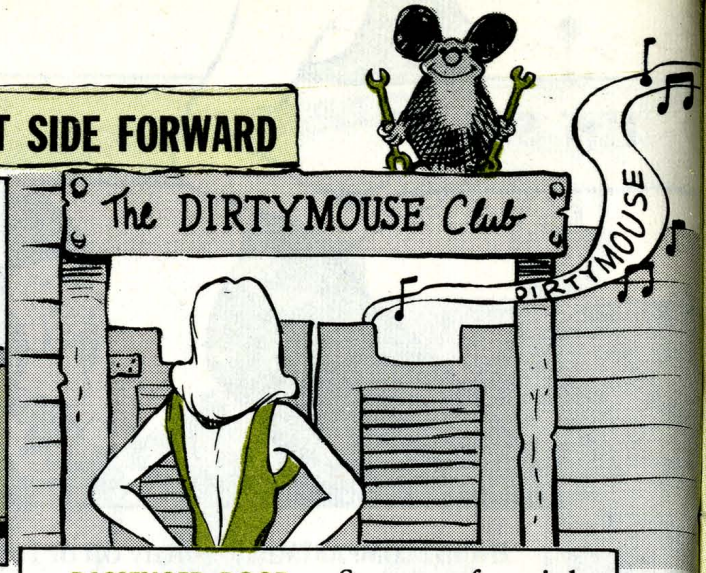
MAIN ROTOR BLADES — Must be in Connie Rodd condition. That's No. 1! Weights OK?

P.S. MORE

FUSELAGE — LEFT SIDE FORWARD

SERVOS AND FLIGHT CONTROLS — Look for extra oil seepage, leakage. Fittings secure?

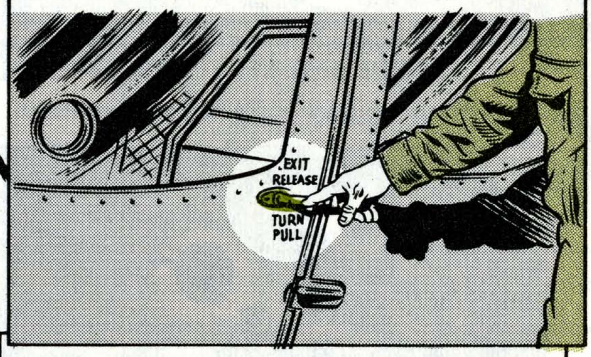




PASSENGER DOOR — Same as for right side.

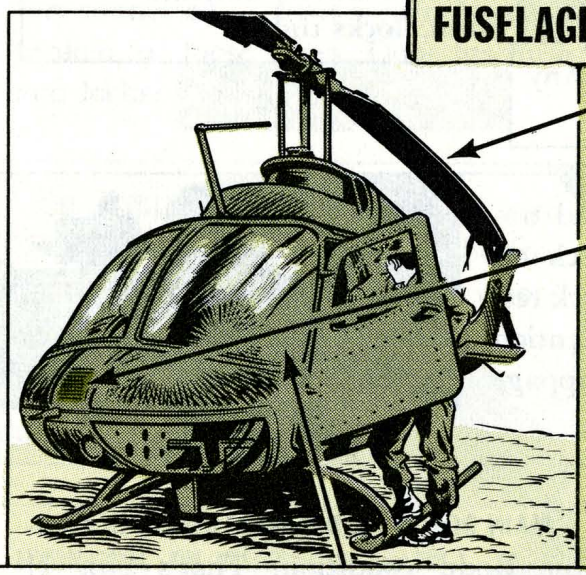
FUEL SUMP — Make sure the crew chief drained some fuel into a clean sample bottle. It has to be tested and eyed for water, dirt or rust . . . NONE IS ALLOWED.

CREW DOOR — Same as for right side.



STATIC PORT — Same as for right side.

FUSELAGE — FRONT



MAIN ROTOR BLADE — Same as before.

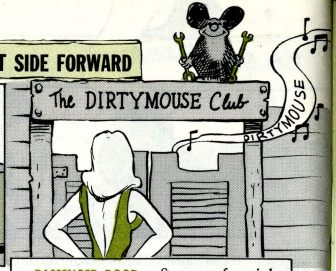
RAM AIR GRILL — No obstruction.

FREE AIR TEMPERATURE BULB — No obstruction.

WINDSHIELD — Cleaner the better. No loose rivets, dents, deep scratches.

FUSELAGE—LEFT SIDE FORWARD

SERVOS AND FLIGHT CONTROLS—Look for extra oil seepage, leakage. Fittings secure?



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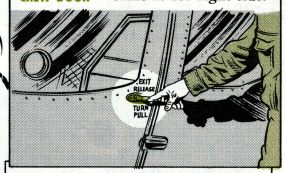

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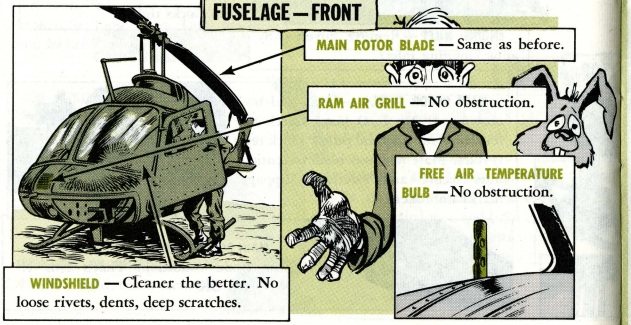

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LANDING LIGHTS — No broken glass, bulb. Are they clean? Underside of fuselage gets careful—on hands and knees—eyballing. Look for bullet holes, rips, tears, popped rivets.

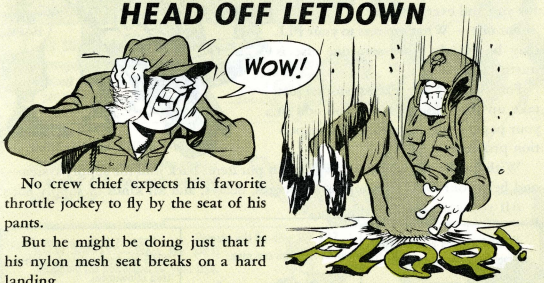
Don't play around with the walk-around. Be on the lookout for gadgets, gizmos, bolts, nuts, foreign objects, etc., that are out of place, broken, unsecured or mis-alined.

An Ole Pro Happymouse goes 1 up on a Luckymouse when he pulls a pre-flight inspection. He pulls it by the **CL and the Dash 10 TM.** Sure it means homework, but it's worth his hide.

Fight dirty . . . the preflight, that is. Be sure . . . safe.

You can always wash your hands later, Dirtymouse!

HEAD OFF LETDOWN

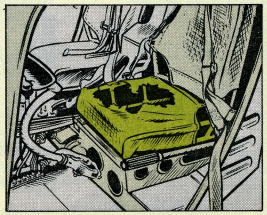


No crew chief expects his favorite throttle jockey to fly by the seat of his pants.

But he might be doing just that if his nylon mesh seat breaks on a hard landing.

With sun, rain, sweat and high temperatures working on the fabric, it just naturally loses strength after awhile. So, TM 55-1500-204-25/1, Ch 1 (Sep 70) to the general aircraft maintenance pub now calls for changing the webbing every 2 years. Para 3-310d, has the poop.

Be sure to make the 2-year frequency entry on the log book DA Form 2408-18, pronto.



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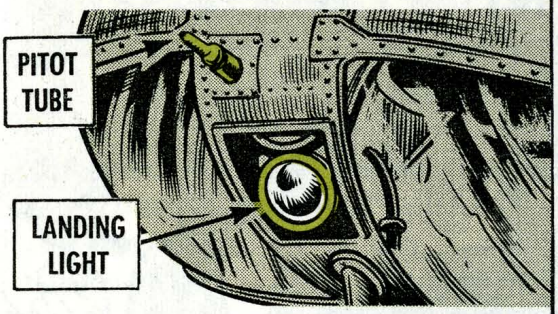

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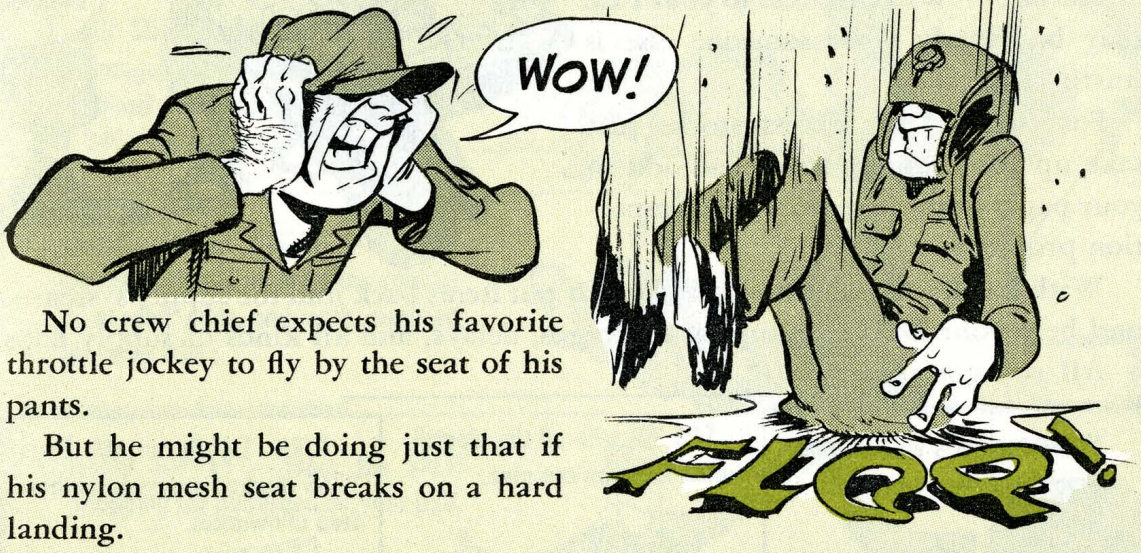

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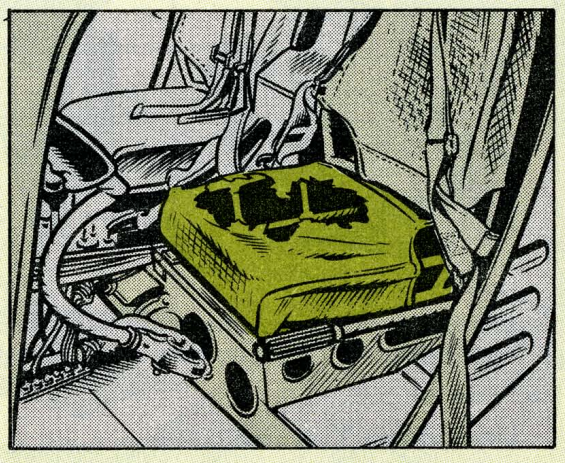
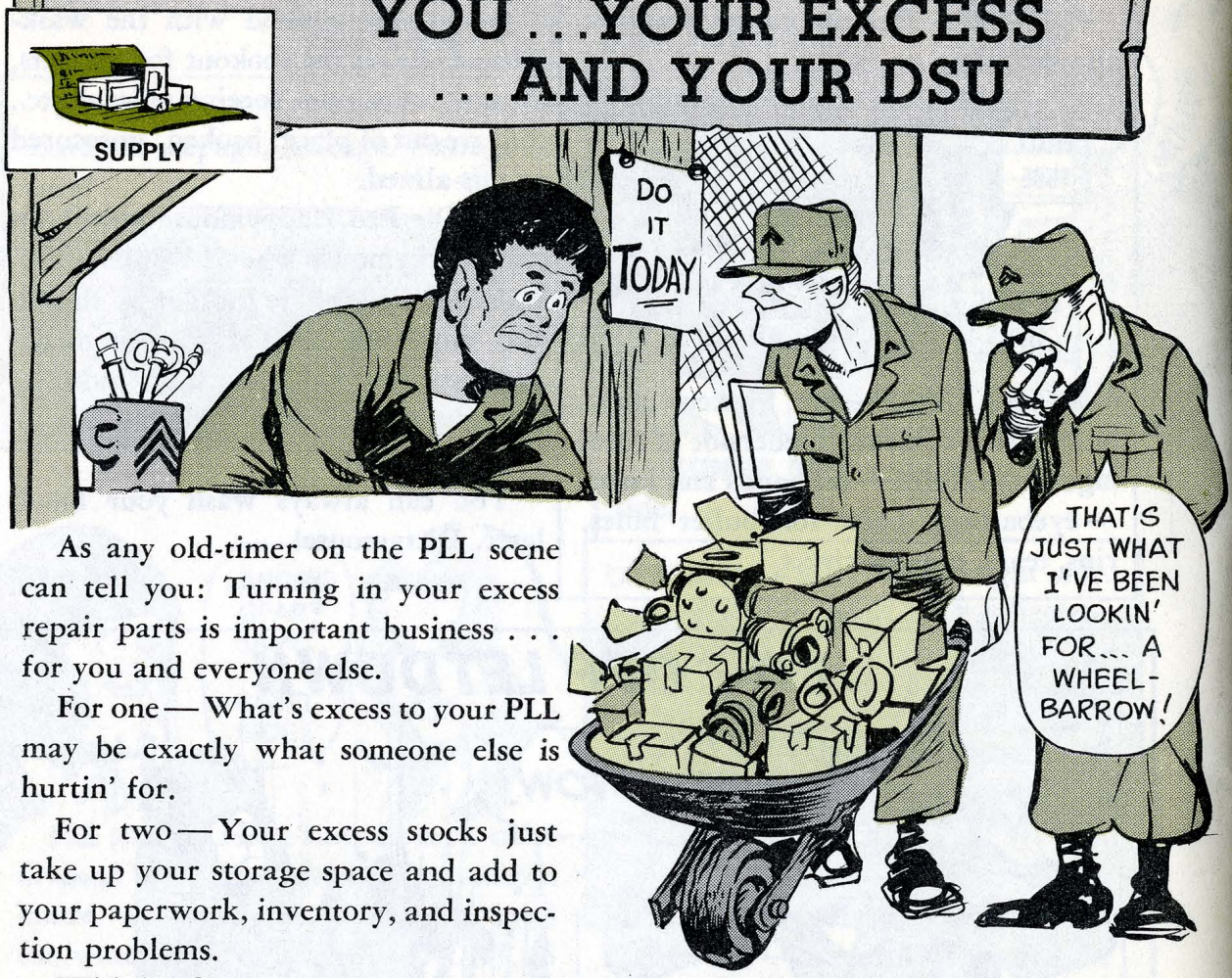


YOU . . . YOUR EXCESS . . . AND YOUR DSU



As any old-timer on the PLL scene can tell you: Turning in your excess repair parts is important business . . . for you and everyone else.

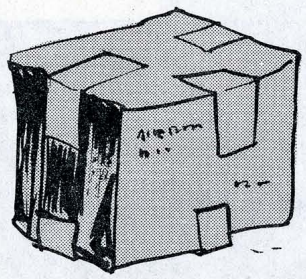
For one — What's excess to your PLL may be exactly what someone else is hurtin' for.

For two — Your excess stocks just take up your storage space and add to your paperwork, inventory, and inspection problems.

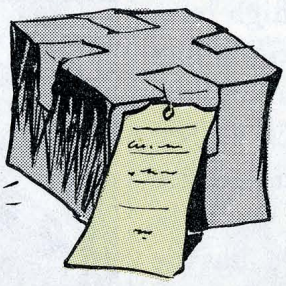
With hardly any sweat at all you can put items back into the supply system — and help your DSU ease supply shortages, delays, and all kinds of supply flaps.

All you gotta do is:

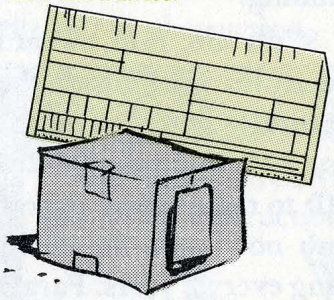
WRAP the parts well (in their original package, if possible).



TAG 'EM with all the identification info you can give.



TURN 'EM IN on DA Form 2765 marked excess to authorized allowances.



Some other PLL man down the road may be turning in exactly what DSU has due-out to you.

Do it now. You can't lose.

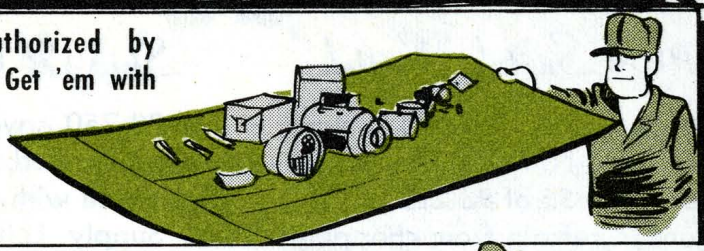
PLL MAN . . .

COUNT YOUR WAYS AND MEANS

How do you support your shop's mechanics . . . ?

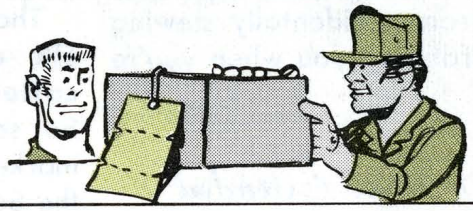
WITH:

1. **PLL STOCKS** — Authorized by equipment manuals. Get 'em with a DA Form 2765.



2. **FRINGE ITEMS** — Same as 1, but request as needed.

3. **DX SUPPLY** — From DX (Direct Exchange) list published by your DSU (Direct Support Unit). Use DA Form 2402 for DX swap.

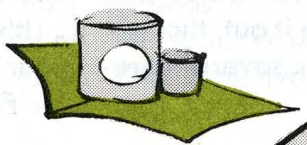


4. **QUICK-SUPPLY STORE (Formerly Country Store)** — Over-the-counter as-needed odds and ends supplied by some DSU's.

5. **SALTI SUPPLY** — From the SALTI shopping list published by your DSU.

6. **SELF-SERVICE-SUPPLY-CENTER** — When you're authorized a credit card for supermarket type shopping by your DSU.

7. **SB 700-50** — For expendables not authorized by other pubs. Use DA Form 2765, or whatever form your DSU prefers.



MPQ-10A Switch "Switch"

Hey, man. Forget that "safety switch" substitute on the AN/MPQ-10A Radar Set article on page 55 of PS 222.

If you want to refrain from chopping off a hand and a leg when you're testing or repairing the set, use the ANTENNA RELEASED switch on the meter and switch panel . . . there on the main frame of the tracker.

That's the dude to use to prevent the antenna from accidentally slewing around and grabbing you when you're working on it.

MWO Time Extended

Here's good news if you've got an M40A1 106-MM recoilless rifle and you forgot to have your armorer apply MWO 9-1015-221-20/1 (Aug 69). This MWO makes the rifle safer by improving the firing mechanism. The modification kit to do the job (FSN 1015-865-3083) is a free issue until July.

Washable Dust Catcher . . . ?

Yep — your M4 dust respirator (FSN 4240-368-6149) is washable. Any mild laundry detergent will do the job. Just swish the mask around in sudsy water. Then swish it around in clear water and let it drip dry. Never wring it out, though. That can distort it. It'll take several careful washings.

Ship If Called For

TM 38-750 says: Tag and hold EIR exhibits till called for.

But in line with the TM rule, USAVSCOM Supply Letter 23-71 (May 71) called for immediate shipment of aircraft EIR exhibits from Vietnam — OH-58A airframe exhibits to Red River Army Depot and all other aircraft exhibits to U.S. Army Aeronautical Maintenance Center.

That means these items (**all aircraft EIR exhibits from Vietnam**) are **called for** any time an EIR is submitted. So send 'em as requested, packed, marked and tagged as spelled out in the Supply Letter.

Sample Selectee

If your outfit's one of those "specific units" selected from time to time to collect sample equipment maintenance data in the TAMMS program, you can read the basic rules in AR 750-37 (Mar 71). Once a unit is asked to collect data in this program, selectee "greetings" will spell out details on what's wanted.

Hinge Pin FSN

Need a hinge pin for your Model 447-2 EX immersion heater, FSN 4540-453-9146?

It's item 11, in Fig 4-6, page 4-10 of your TM 10-4500-200-13 (Dec 69). Ask for FSN 5340-124-9205.

Would You Stake Your Life right now on

Connie's Mini Mini's

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More On Antifreeze

So what's the story on antifreeze in commercial automotive engines? Dump it every spring? Or keep it in the cooling system?

The story's pretty much the same as for military-design vehicles — as spelled out by TB 750-651 (Jan 71).

You keep the antifreeze until your check with Test Kit, Reserve Alkalinity, FSN 6630-169-1506, shows the corrosion protection is too low.

This word is in TB 750-982-2 (15 Apr 71.)

How 'Bout That!

All the repair parts for your 1.5 KW military design generator are now in TM 5-6115-323-15 (Sep 70). It includes parts for the AC and DC models. Parts with usable code "A" are only for the 60 Hz, and "B" for the 28-volt job. Parts with no code are for both.

Sheridan Compressor Oil

The air compressor in your M551 Sheridan has to have a special oil — and it needs to be changed after every 50 hours of operation. Use Lubricating Oil, air compressor, Spec BMS3-7A. It comes in a one quart can under FSN 9150-753-4667. Using any other kind of oil can cause serious damage to your compressor's insides.

How Tight's Tight?

Believe the words, not the picture. That's how it is in your M113A1 operator's manual. TM 9-2300-257-10 (Dec 68) tells you in para 3-28 to get ¼-in or more clearance over No. 2 roadwheel with track touching No. 3 wheel — and that's right. But Fig 3-10 makes it look like you can get over an inch — which you can't if everything's OK. A TM change will soon clear it all up.

Hurry, Hurry, Hurry!

You users of SB 700-25, Consolidated Interchangeable and Substitute Item List (CISIL), had better hurry if you want to tell whether you like or dislike the SB and why. Just repro DA Form 3668-R, which is part of DA Circular 310-7 (Jan 71), fill it out, and mail it to: AMCCDO, New Cumberland Army Depot, New Cumberland, PA 17070.

Stop M656 Tire Loss

There's new word on the pressure you need on the 4 front tires of winch-equipped M656-series vehicles. You need to boost the 30-lb level to 40 pounds to stop tires from wearing out too soon. Ask your motor officer for an OK. Directive pub word will be along soon.

Would You Stake Your Life (right now) *on the Condition of Your Equipment?*

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the Condition of Your Equipment?

SMOKE POLLUTES
KEEP IT DOWN
YOU CAN'T HELP HAVING A LITTLE BUT, ANYTHING DARKER THAN THIS IS HAZARDOUS TO HEALTH!
IF YOUR DIESEL ENGINE'S SMOKE IS TOO DARK
• GET YOUR ENGINE TUNED
• CLEAN OR REPLACE AIR CLEANER ELEMENT WHEN DIRTY
• ACCELERATE SLOWLY AND SMOOTHLY
• NEVER OVERLOAD VEHICLE
• NEVER LUG ENGINE
• IDLE ONLY WHEN NECESSARY
• REPORT SMOKY ENGINES
IF YOUR BUDDY HAS A SMOKY ENGINE
TELL HIM
BOTH OF YOU MUST BREATHE